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Backwoods



Home magazine

practical ideas for self reliant living

***The best and worst
U.S. Presidents***

***Crabbing, clamming, & smelting
Freeze-branding horses
Start a chicken flock
Be your own butcher
Build a solar hot tub***



My view

That's not what we mean

On page 83 of this issue is a letter from reader Donald Eaton of Sturgis, MI, concerning my commentary last issue about various government agencies raiding and confiscating the home, church, and land of Pastor Paul Revere, an Oregon minister who refused to pay his property taxes. The letter is fairly typical of the argument put forward by liberals against libertarians like myself when we speak out against tax abuse by government, namely: you use public services, so you should pay taxes.

I won't bother speaking against the more absurd parts of the letter, except to say that Mr. Revere was not expecting "protection if someone were to come and take his belongings or kidnap his child." That's just what the government did to Revere—they took his belongings and tried to take his children away from him, all in the name of unpaid taxes.

I'll just speak against the argument that we should all pay taxes in exchange for government services. As usual, the simple statement put forth by liberal tax collectors misses the point. First, let me state two facts:

- Most people, including me, don't mind paying taxes, so long as they are reasonable and used for the legitimate functions of government. Note the words *reasonable* and *legitimate*. Those are words tax collectors never use.
- Most people also don't think tax collectors should have the power of Gestapo police, allowed to intimidate and kill citizens. It doesn't matter if the citizens are eccentric or not; if Thomas Jefferson were alive today, he would be considered an eccentric to today's tax collector.

Now let's look at some background: The 16th Amendment to the Constitution, which vastly expanded Congress's power to levy taxes and inaugurated today's federal income tax, was presented to the states as a way to tax the rich, the corporations, and those who inherited unearned wealth. The states, especially the southern states which had mainly poor agrarian populations, bought into this line and ratified the amendment in 1913. Congress immediately passed a modest tax rate of 1% for a person's first \$20,000 in earnings, which is the equivalent of nearly \$300,000 in today's money. The top tax bracket was a modest 7% on someone making over \$500,000, which is the equivalent of nearly \$7.5 million in today's money. So that was the harmless beginning, and by 1939 still only 5% of Americans paid any income tax at all.

Look at the situation we have today. We have come to find out that the government now considers us all rich because, when you take together the combined local, state, federal, sales, and all the hidden taxes on everything from medicine to broccoli, the average American now pays near-

ly 40% percent of his or her income in taxes. Many of us have to have two working adults in the same family to pay for both our family's needs and the tax needs of government. So much for *reasonable* taxes.

And how about the *legitimate* functions for which the government collects these *reasonable* taxes? Fire and police protection, road building and maintenance, libraries, etc., were paid for by local taxes before 1913. Most Americans have no problem with government raising and spending money on these things. That's not what we mean when we, as overburdened tax payers, complain about taxes.

We are complaining about the excess taxes that are collected, the ones that support a huge and inefficient government bureaucracy that can provide itself with a retirement package that dwarfs what the private sector can afford, while at the same time it administers a massive welfare system that has made an entire race of Americans permanent wards of the state. We are complaining about an incredibly expensive educational system that turns out high school students who can't read their diplomas. And we are complaining about the thousands of special interests who have permanent lobbying offices in Washington D.C. so their pet projects can voraciously suckle at the government teat. Government has gone far, far beyond *reasonable* and *legitimate*. That's what we're complaining out.

And what has been government's response when citizens have taken the legal path by going to the ballot box and telling government they were being taxed too heavily? In 1978, when Californians passed Proposition 13, the nation's first successful ballot initiative that rolled back property taxes and limited future ones, government across the board responded by closing libraries and cutting back fire and police services. The government took a "punish the voter" attitude. But no civil servants lost their jobs, and none of the nonessential government programs were cut.

Today when some bloated bureaucracy wants to increase its power it runs a media campaign to warn voters that vital services they need or want will have to be cut unless some newly proposed tax is enacted.

And yes, we tax payers are also complaining about the Gestapo tactics of the tax collecting agencies. You can murder and rape today and some judge or jury may feel sorry for your disadvantaged upbringing and set you free. But try not paying even part of your taxes, and the government may just come after you with guns, just as they did with Revere. By definition the government has decided you are eccentric if you don't want to pay your taxes.

The question isn't should we pay taxes for government services, but should we pay outrageous taxes for excessive government services or services that should be left to the private sector. The question of how much tax we should pay is directly related to how big government should be. I say it should be small, but then again I am just another eccentric.

Somebody shoot me, quick! Δ

Build your wire or electric fence properly the first time, and it will serve you for years

By Charles A. Sanders

“Good fences make good neighbors,” American poet Robert Frost said. And most of us wouldn’t argue with him. Good fences provide a solid reference point from which boundary disputes are kept from erupting, and they keep livestock in—or out. Spend some time up front and build a good fence, and it will save you time in the long run, plus serve you well for years.

This article is about field fencing and electric fencing. When building them there are some tried and true rules that should not be skipped or skimped on. Some of these have been taught to me, but others I have learned the hard way.

When buying fencing, it is easy to be tempted into buying cheaper brands of wire. However, I have found that fencing is like a lot of other



Properly set corner and brace posts. Note the diagonal brace wire runs from the base of the corner post to the top of the brace post. If a solid diagonal brace is used, run it from high on the corner post to the base of the brace post.

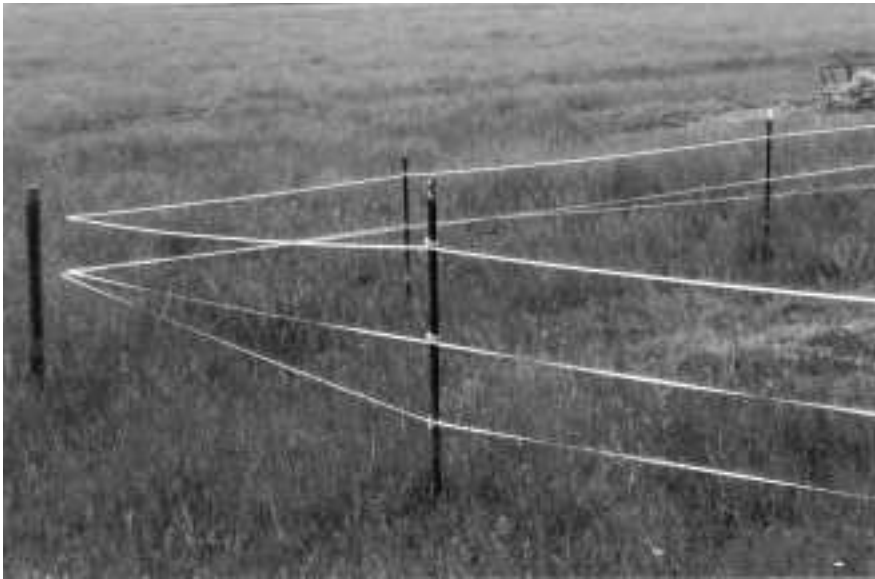
things—you can pay for it now or you can pay for it later.

Barbed wire is one item where the cheaper brands have done all right for us overall. They stay bright and shiny with good galvanizing. Woven wire is sold by the gauge of the wire: the heavier the wire, the pricier the fencing. The type of wire called “field fence” will not have the number of vertical wires as does regular woven wire. Field fence wire usually has the vertical wire or “stays” placed on 12-inch centers. Normal stock fence is six to eight inches between the stays.

When it comes to buying and using woven wire, I have found that the cheaper brands just do not hold up. They are made of lighter gauge wire which is not tough or durable enough, especially if you have children who periodically use the fence for a ladder to the other side. On the rolls which I have used, the galvanized coating seems to have eroded away relatively quickly, and the wire rusts easily. Go for the better brands of woven wire. It



This photo shows how the wooden fence stretchers and “come-along” are used together. Notice how the wooden stretchers clamp tightly to the wire to help stretch the wire evenly.



Electric fence ribbon is well suited for horse paddocks and gardens. Its high visibility helps prevent flighty horses or running deer from tearing it down.

will be worth it. Benefit here from my experience and lapses in judgment.

Woven wire is manufactured with tension-producing crimps spaced along the run of wire. If you overstretch your fence wire as you are installing it, these crimps will be stretched beyond their limits and you will end up with a sagging fence. Similarly, if you do not provide sufficient tension when stretching the run of wire, time, gravity and the weight of the wire itself will cause the fence to sag. Use fence stretchers, not just a tractor or truck to stretch wire. Fence stretchers or come-alongs provide gradual and adjustable tension on the run of wire. This is nearly impossible to do if just using a tractor or truck, when overstretching is the normal result.

Fence corners

Your fence corners can pretty much determine how well your fence is going to bear up. Proper construction of fence corners and terminal points, such as gate posts, is essential. There is a tremendous amount of tension on a given run of fence and it takes some pretty stout posts and anchors to support it.

When constructing your corners, generally you will want to use a larger and longer post. Today, treated corner posts of 6 to 8 inches in diameter are commonly available. These posts are usually about 7 to 8 feet in length and are set a bit deeper in the post holes, usually two and a half to three feet.

A cross piece will add stability to the corner. If you are using a wooden cross piece, you can notch into the corner and brace posts and set the cross piece into the notches. Tension supplied by the brace wire will hold the cross piece in place. You might want to toe-nail the cross piece into each post to be sure. That also helps keep the piece in place while you are constructing the corner. If you are using a pipe cross piece, a nail in each post will give you a point from which to hang the pipe until

you tighten the wires. Cross pieces can be made from wood, pipe, old steel fence posts, or even old bed rails.

The critical part of constructing post corners is the proper positioning of the brace wires. It is essential that the brace wire runs from the bottom of the corner post up to the upper portion of the brace post. This is because the tension is pulling against the wire. The top of the brace post is anchored to the most stable point on the corner post—the base.

If you are using a post as a diagonal brace, place it so that it runs from the top of the corner post towards the bottom of the brace post. That way, the tension would be pushing the most movable part of the corner post—the top—against the most stable part of the brace post—the base.

If you are at the end of a fence run and plan to hang a gate there, you want to construct the fence at that point as you would a corner. That is, use a heavy corner post, a stout brace post, and diagonal wire from the base of the corner towards the top of the brace post. Since there will be the added weight of a heavy gate hanging



Rope and pulley fence stretchers. Pulling the rope outward at the lever seen on the left-hand pulley locks the rope in place. The operator can then secure the tightened wire in place. The set of stretchers on top has two open hooks.

This set is made for use with the long wooden woven wire stretchers. The smaller set of pulleys shows a wire clamp on the left-hand pulley. This set is used to stretch

on the corner post, add another diagonal wire running from the base of the brace post to the top of the gate post. In that way, the weight of the gate will be pulling the top of the corner post against the base of the brace post. This will make the gate less likely to sag.

Electric corners

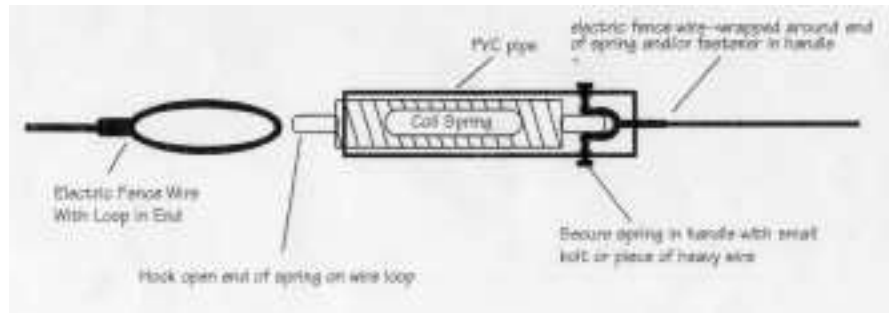
Electric fences are, in many cases, a homesteader's dream. They are adaptable, durable, portable, and easy to put up. I know of several ranchers who have grazed large herds of cattle for the past 40 years using just electric fences. For those cattle, there was nothing more than a single strand of barbed wire and a good fence charger standing between them and bovine freedom. In fact, once used to the unpleasant jolt of an electric fence, even the largest of bulls can be confined with an electric fence.

In erecting an electric fence, you will need posts, insulators for those posts, wire, and a good fence charger.

Some of the most economical posts available commercially are the ones



Electric fence tape is made from strong plastic and has fine wire woven into it to conduct the electric charge.



This homemade gate handle for an electric fence can easily be made from scraps in the workshop. Adapt this drawing to what you have available.

made from 3/8-inch steel rods. They are relatively inexpensive and do a good job of holding the fence wire up off the ground. Steel "T" posts are popular and available in several lengths. For electric fences, the shorter ones do nicely. Of course, wooden posts work just fine. Whichever type of posts you have, be sure to purchase enough of the appropriate insulators to mount your fence to the posts. With the electrical current running through the wire, it must be insulated from the posts or the charge will run to ground, rendering the fence ineffective. Dozens of different insulators are available to meet just about every need. In reality, most electric fencing jobs I have done required a combination of materials. A hefty wooden post for a corner here, some steel rods alternated with some "T" posts and perhaps a ceramic insulator tapped into an odd corner tree there. Use what you have or can come up with. I have found that farm auctions are good places to buy fencing supplies cheaply, perhaps with the exception of wooden posts. At more than one auction, I have purchased a bucketful of electric fence insulators for a couple of dollars and also got the bucket. Gates, often referred to as "gaps," can be created just about anywhere along the run of fence. Plastic springloaded handles are available where you buy the insulators and wire, or you can make one from a scrap of PVC pipe and a bit of heavy wire (see drawing).

I have seen electric fence wire available in either aluminum or steel. I've

opted to use the lighter gauge steel wire. I have found it easy to work with and tougher than the softer, albeit more visible, aluminum wire. I have also erected a more permanent electric fence using alternating wooden posts and steel posts and stringing a single run of barbed wire along them using the appropriate insulators.

Available now are several varieties of electric fencing made from durable plastic woven ribbon with stainless steel wire woven right into it. This material offers the added advantage of being highly visible. As such, it is very useful for fencing horse paddocks, and to fence gardens to repel deer and other varmints.

Fence chargers themselves are pretty much trouble free. They are made to run off regular household electric current, heavy dry cell batteries, or small solar panels. With the solar fence chargers available, it is possible to have charged fences in areas where there is no electrical power, and you don't have to worry about replacing a worn-out battery. The solar units are reasonably priced, and normally they are much cheaper to buy than the cost of running electrical power to a regular fence charger.

Fences are a long term investment on your homestead. They are not cheap to install, but they are relatively inexpensive to maintain if they are erected correctly the first time. Spend some time planning and putting up your fences, and you will save time and worry. Δ

Build your own solar hot tub

By Robert C. Herman

Any homesteader knows that among the many rewards of a self-sufficient lifestyle are a sore back and aching muscles. Recently I realized what I needed to ease the aches and pains after a long day of chopping wood and moving soil: a hot tub.

Not one of those party-size, fancy marble pools with jets and bubbles and surround-sound stereo, but a comfortable place to soak away the knots and contemplate my place in the universe.

Since I haul my water, generate my electricity, and basically live by my wits, the design criteria for my hot tub

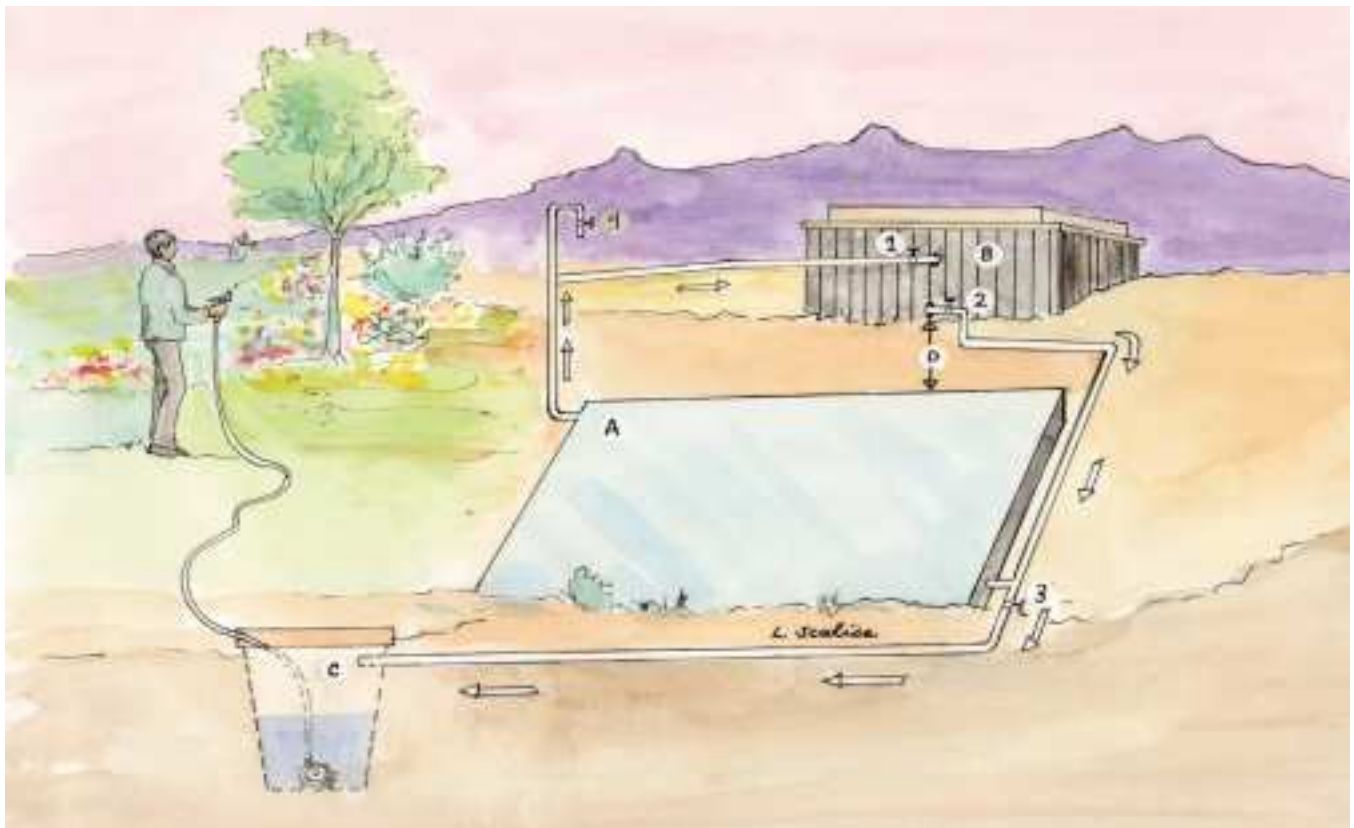
were: cheap to build, free to use, and frugal with water.

With about \$100, some recycled hardware, and a bit of ingenuity, I built a thermosyphoning, solar heated tub that uses no electricity, no fuel, and less than 60 gallons of water, which is subsequently re-used in the garden.

The principles that make this system work are specific but simple. The skills and tools required to build the tub enclosure, and to plumb the system, are rudimentary. The satisfaction of soaking in my tub as the sun drops over the Rockies is priceless.

Your tub can be made of any suitable container that will hold you and enough water to cover your body. I chose a 100-gallon poly stock tank made by Rubbermaid Agricultural Products and available for about \$70 where ranch supplies are sold. This tank is oblong, about 2 1/2 x 4 x 2 feet deep, which is large enough for one person or two very close friends. It is strong and durable, won't rust, and its rounded edges make it comfortable to sit in. Rubbermaid makes these tanks in other sizes. If you are extremely long-legged or plan to share the tub frequently, you might want the 150-gallon size. For my purposes, though, the additional expense and water requirements were not justifiable.

The thermosyphoning water heater is elegantly simple and effective. Basically, it works like this: the solar collector is filled with water and



The thermosyphoning solar hot tub. Water heated in solar collector (A) rises by natural convection and circulates through valve #1 to hot tub (B). Cooler water at bottom of tub circulates through valve #2, back to collector for reheating. Valve #3 allows system to be drained into sunken barrel (C), from which waste water is pumped to irrigate garden. Valve #4 is pressure relief valve. Note: vertical dimension "D" must be at least 12 inches, preferably 24.

pointed at the sun. Sun rays penetrate the glass (or fiberglass) face of the panel, strike the heat-absorbing plate covering the water pipes, and transfer heat to the plate, the pipes, and the water. Since hot water is less dense than cold water, the heated water rises to the top manifold, up into the “hot” pipe and to the tub. At the same time, cooler water from the bottom of the tub drains down via the “cold” pipe and into the collector’s lower manifold to replace the hot water that is rising. As long as the water in the collector is being heated and the water in the bottom of the tub is cooler, hot water will circulate to the tub and cooler water will return to the collector. This system works well, with no moving parts, provided that you take a few simple steps to help gravity do its job (see the drawing).

Back in the mid 70s, after OPEC taught us the fragility of our dependence on foreign oil, the federal government offered tax incentives to encourage the development and use of alternative energy technologies. As a result, thousands of solar heating systems were built and installed on houses across the country. Some of these systems worked better than others and when the tax credit program expired, the solar heating fad went the way of the leisure suit.

Depending on where you live, it is very likely that there are abandoned solar collectors nearby, patiently waiting to be rescued from the scrap heap. Ask around, or advertise in your local newspaper that you are looking for used solar collectors and associated hardware. Prices will be negotiable, but I would not expect to pay more than perhaps \$20-40 for a good 4 x 10-foot collector (you only need one), and for that price would hope to get a truckload of pipe, valves, and fittings thrown in. Some folks will even give away their collectors and all the associated plumbing and hardware, just to get it out of their barn or off the roof. If you really can’t find a free or cheap used collector in



The author enjoys the fruits of his labor.

your area, you can build your own. My own heating source is a 4 x 10-foot flat plate solar collector from the late seventies. It’s what I had around, but a smaller collector would do the job, especially if you insulate the tub well.

One caveat: make sure the solar collector you rescue has not been damaged by water freezing inside its works. The flat plate collector is made up of a series of parallel, small diameter copper pipes with a larger diameter manifold at each end. If water is allowed to sit in these pipes at subfreezing temperatures, the pipes will burst. You can check for damage either by removing the glazing and visually inspecting the pipes, or by running water through the collector and watching for leaks.

Once you have collected the basic components, you need to site your tub and solar collector. As noted in the drawing, the bottom of the tank must be at least one foot, preferably two, higher than the top of the collector. A level spot at the top of a south-facing slope is ideal; the tub sits on the level, with the collector tucked into the hillside below.

Alternatively, you can site the tub on a platform or deck, with the collector located below. Make sure, though, that the deck is strong enough to carry the weight of the full tub (including 500 pounds of water, plus your own weight).

There are several considerations to address when siting your collector. Ideally, it should face south (within 15 degrees of due south) and have full exposure to the sun between 10 a.m. and 2 p.m. The collector can be oriented on its horizontal or vertical axis, and should be inclined at an angle of at least 15 degrees off horizontal. (30 degrees is better; for year-round use, the optimal angle of inclination should equal your local latitude plus 10 degrees). Finally, the collector should be tilted a few degrees so that the lower corner where the return (cold) pipe attaches is the lowest point in the system and the “hot” pipe comes out at the highest corner. This helps with the thermosyphoning and with draining the system down.

Secure the collector in place by attaching it to posts or rods driven into the ground. The exact method will depend on your circumstances, but

need not be fancy. Just make sure the collector is well supported and stable.

Once you have selected your tub site, level the area and set your tub in place. It is a good idea to raise it off the ground in order to reduce heat loss and moisture problems. I used a hardwood pallet about a foot longer and wider than the tub, and covered it with 3/4-inch plywood. This insulated the tub from the ground and provided a base for framing the enclosure.

Plumbing the tub is relatively simple. I used 3/4-inch copper pipe because I already had it around. If I had to buy new pipe, I might have chosen CPVC (PVC won't take the heat) for reasons of economy. In choosing your pipe, remember that smaller diameter pipe is more restrictive and thus will reduce the performance of your thermosyphon system. I would not use pipe smaller than 3/4-inch diameter.

The stock tank I used already had a fitting near the bottom with a 1 1/2-inch drain plug in it. I simply removed the plug, replaced it with a 1 1/2-inch to 3/4-inch reducing bushing and a 3/4-inch male adaptor (MIP) and I was ready to attach pipe.

For the "hot" (inlet) pipe, I had to cut a hole in the wall of the tank. I

located the inlet pipe at a height equal to 2/3 of the minimum water depth of the tub when filled. The inlet must be located low enough to be submerged when the tub is filled, or the thermosyphon will not work. A 1 1/4 to 3/4-inch bushing, silicone caulked and secured on the inside of the tub with a 1 1/4-inch flare nut, formed the hot side inlet.

Actual routing of the pipes connecting the tub with the collector will be specific to your installation. A few general guidelines apply, though:

- Be careful to avoid any high spots in the pipes where air pockets can become trapped.
- Where the "hot" pipe comes out of the collector, route the pipe vertically, then nearly horizontally to the tub, rather than creating a long, steeply diagonal rise to the tub.
- Install a gate or ball valve on both the "hot" and "cold" pipes to control the flow of water.
- Install a safety (pressure relief) valve in the "hot" pipe to avoid dangerous pressure buildup.
- Install a drain valve at the low point in the system.

Keep pipe runs as short as possible. Try to minimize 90-degree turns and

other restrictions, and install threaded unions in both pipes near the tub so that the system can be easily assembled and taken apart.

Before building your tub enclosure, test the integrity of your plumbing. Fill the tub and check for leaking joints and fittings. Any leaks at the tub will be easier to correct before it's boxed in; leaking pipes must be fixed before they are insulated. Once you are satisfied that your plumbing is leakproof, you're ready to close everything up and put the tub into use.

Because the tub was intended as a stand-alone stock tank, it needs no structural support, other than a firm, level base. All you really need is some insulation around the sides and a well-insulated lid to keep the heat in. Beyond that, your tub enclosure can take whatever form you choose, based on materials available, your carpentry skills and aesthetic considerations.

My scrap heap was long on weathered 2x4s from an old deck, so that's what I used for my enclosure. The result was a rustic, handsome box that blends well with the landscape and cost next to nothing to build.

I first framed a box around the tub, then insulated the inside of the box with fiberglass batting and wrapped it with 4 mil poly sheeting. Then I sided the box with vertical battens cut from the 2x4s. With scrap pieces of galvanized steel flashing, I covered the top of the box using silicone caulk wherever the pieces overlapped to form a waterproof layer. Finally, again from old 2x4s, I covered the flashing with a deck surface. Using scrap wood I made a two-piece lid, split laterally and hinged in the middle.

Insulating the top of the tub is important. A very efficient way to keep the heat in the water is to cut a slab of styrofoam to fit inside the tub and float it on the surface of the water. More convenient in use, but not quite as effective, is a layer of foam glued to the underside of the lid.

Once you have enclosed your tub, insulate all exposed pipes. Standard



Tub with collector (lower right). Upper collector is for domestic water heating.

foam pipe insulation works well. Pay special attention to the “hot” side pipes, as heat loss on the hot side will reduce thermosyphoning efficiency. But insulate the “cold” side too to maximize heat retention.

Preparing the hot tub for use couldn’t be simpler: you put water in it. Open valves 1 and 2 (see drawing) and fill the tub to within 8 inches or so of the top. If you fill the tub during the hot part of the day (and if the sun is out), the collector should immediately begin to heat the water. Within 15 minutes heated water should begin to flow into the tub through the inlet pipe. If not, you may have an air pocket somewhere. The easiest way to flush out an air pocket is to open the drain valve, let two or three gallons run out, then close the valve. Once the heated water is circulating, the water in the tub will gradually warm up.

How long will it take to heat the water? That depends on a number of factors, including the size of the collector, the efficiency of the tub insulation, the pipe diameter, and other aspects of your plumbing, your location, amount of sunshine, etc. On a sunny, mid-summer day in Colorado, if I fill my tub with tepid water at 10 or 11 a.m., the water temperature rises to 110 degrees within two hours.

After the initial heating, the collector only needs to maintain the water temperature. From the second day on, your biggest concern will be how to keep the temperature cool enough for comfort. With a reasonable amount of sunshine and a well-insulated tub, your water temperature can become much too hot—more like a crock pot than a hot tub—and you’ll have to cool it down before you can climb in. You’ll need to experiment with this, but I have found three low-tech ways to control the heating process:

- Cover the collector surface. I have used bamboo shades to partially cover the collector, thus reducing its solar input and its water heating capacity.

- Uncover the tub. Open the lid and remove the floating insulation to allow heat to escape from the water.

- Partially close the “cold” side valve to reduce the flow rate of heated water.

Of course, you can stop the circulation, thus the heating, by closing both the “cold” and “hot” valves. This will prevent the water in the tub from getting any hotter, but will increase stratification in the tub, with the hottest water near the top and cooler water at the bottom.

IMPORTANT: Whenever the “hot” side valve is closed, the manual safety (pressure release) valve must be open, or an automatic pressure relief valve must be in place. Water + heat + pressure = steam, and that steam must be released. An automatic safety valve, replacing the human element, is better than a manual valve.

A good thermometer is needed to monitor water temperature in the tub. Avoid the standard pool or spa thermometers, which only read up to 120 degrees (If left “full on,” my tub can heat up to 150 degrees in two days). I recommend a chef’s thermometer (about \$5), with a dial that reads from 0 to 200 degrees F. If you use floating insulation in your tub, simply insert the pointed end of the thermometer probe through the styrofoam into the water. Otherwise, make a small raft out of foam, stick the thermometer through it and float it on the water surface.

Ideal water temperature is a matter of individual preference. I find that 102-105 degrees is good for prolonged soaking and meditation, while 110 degrees provides the kind of deep therapeutic heat that turns knotted muscles into putty. Above 110 or so, it’s time to throw some carrots and potatoes into the water.

Our household uses untreated spring water, which I haul 300 gallons at a

time from a source several miles away. Since I have to truck in every gallon I use, I like to optimize my water use. At the same time, I am disinclined to add pool chemicals to my tub water, nor will I get involved with pH testing or any other slavish rituals. As a result, though I hate to waste water, I have to change the tub water frequently.

My solution to this dilemma is simple. I dug a hole and sunk a barrel in the ground just downhill from the lowest point in the system. Into the barrel I dropped a small centrifugal pump with a float valve. A length of garden hose runs from the collector’s drain valve to the barrel.

About once a week, I drain the water out of the system and into the barrel. The pump sends the water to the various garden areas to irrigate vegetables and flowers. Thus the water is used twice. Nothing is wasted and no chemicals are used.

You can extend the useful life of your tub water by fitting a filter of some sort to the cold water outlet in the bottom of your tub. The neck and top section of an appropriate-sized plastic bottle, press-fit into the outlet, will work. Cut a small piece of aluminum or brass window screen material (steel will rust) and mold it into the bottle neck. Back that up with a wad of filter material and you will catch much of the junk that ends up in the water after a few soaks. Be sure to check the filter frequently, and replace it as needed.

There is nothing like relaxing in your tub at the end of a long day of hard work, or soaking for a half hour at midnight under the milky way. The hot water relaxes your muscles, works out the knots, and soothes the soul. A leisurely soak in the tub allows you to slow down and remember why you chose this self-sufficient lifestyle in the first place. Let other people hand thousands of dollars to the Spa Guy. Do it yourself, for peanuts. Δ

Think of it this way...

By John Silveira

Who were the best...and worst U.S. Presidents?

It was one of those days I love. We were between deadlines and Dave, Bill, Mac, and I had gone fishing on the lake. Dave, of course, is Dave Duffy, the publisher of *Backwoods Home Magazine*; Bill is Dave's friend who drops in occasionally; and Mac is O.E. MacDougal, Dave's poker-playing friend who lives down in Ventura, California, pretty near where I live.

We'd caught a slew of fish, mostly perch, but there were a few crappie in there, too. Dave filleted most of them with some help from Bill and Mac. They—Dave in particular—have the knack for that job. I'm clumsy, and none of them want to be near when I have a sharp object in my hand. They let me watch.

When they finished, three of us sat in the office drinking a little beer while Mac was in the little kitchen that is part of the office. He said he had a recipe he wanted to try and he volunteered to fry some of the fish for us.

Bill leaned back in his seat and out of the blue asked, "If you were to make up the greatest baseball team of all time, who'd you put on it?"

This is the kind of game I like. "Any players, living or dead?" I asked.

"Yeah."

"By position?" Dave asked.

"We'll go position by position," Bill said.

"What position are we going to start with?" Dave asked.

Bill thought a second. "Let's start with pitchers."

"Left handed or right handed?" I asked.

"And what about relievers?" Dave asked.

"Okay, okay," Bill said and thought a second. "We'll do left and right

handed starters, then we'll go to the relievers, then we'll do each of the infield positions..."

"I get it," Dave said.

"Then start with the left handers," Bill said.

"Who goes first?" I asked.

"I will," Dave said. "The left hander has to be Sandy Koufax."

"That one's easy," Bill said, "I'll go with him, too."

"Lefty Grove," I said.

"Who?" Dave asked.

"Lefty Grove. He pitched for the Philadelphia Athletics and the Red Sox."

"Never heard of him," Dave said.

"He pitched back in the '20s and '30s—I think even in the early '40s. According to the baseball analyst Bill James, if you put Grove and Koufax side by side, Grove is clearly better."

"I've never heard of Grove or this Bill James," Dave said.

"Robert 'Lefty' Grove," Bill said thoughtfully. "Hmm. I've heard he was good, but I'll still go with Koufax. What about you, Mac, have you been listening to us?"

Mac was busy mixing up flour, corn meal, grated cheese, and a bunch of herbs and spices. "Babe Ruth," he said without looking up.

"No, we're doing pitchers, now. We'll get to the other positions later."

He looked up. "It's still Ruth."

"But..." I said and Bill cut me off.

"Oh, I see where you're going. Ruth started out as a pitcher."

"He wasn't just a pitcher. He was a great pitcher," Mac said. "While he pitched for the Red Sox, he was one of the most feared and dominating pitchers of his time. He set pitching marks that stood for decades and, though passed in modern times, he's still the



John Silveira

number two man on some of those records lists. He'd have made the Hall of Fame even if he'd never picked up a bat. He was so good that a hitter as great as George Sisler said he was making a mistake giving up pitching to become a hitter. Of course, no one knew that Ruth would turn into what many believe to be the greatest hitter of all time."

"He was really that good of a pitcher?" Dave asked.

"Absolutely. Grove or Koufax may have been the best left hander ever in the conventional sense, but Ruth wasn't that far behind, and imagine a great pitcher who is also the greatest hitter that ever lived. And if I pick Ruth as my left-handed starter, I can have Hank Aaron as my right fielder. Otherwise, Aaron's off my team."

Dave shook his head. "You always have a different way of looking at things. I've seen lists of all-time great teams, but I've never seen any sports writer put Ruth on his list as a pitcher. I'm going to go with your choice."

"Me too," Bill said.

I didn't say anything. I was just wishing I'd thought of it.

"Are we ready to do right handed pitchers?" I asked.

"How do you do it?" Dave asked Mac. "How do you get these new angles on things?"

Mac dipped the fillets into a milk and egg mixture in a bowl. He then dumped part of his dry mixture in a shopping bag and threw in some of the fillets. He shook the bag, but he stopped and thought a second. "Lists like this depend on your criteria. It's like asking who you think the greatest Presidents were; it all depends on what your criteria are." He shook the bag a little more, then looked in and examined the results. He took the fillets out, placed them on a plate, then put in more and shook the bag again.

We watched in silence. The three of us must have been thinking the same thing. Finally, Bill said, "Okay, I'll bite. Who do you think were the greatest Presidents?"

Mac stopped again. "I wasn't trying to bait you when I said that. I just want you to realize that when some so-called expert makes up a list—such as an all time best baseball team or a list of the greatest Presidents, you have to know what his or her criteria are.

"With baseball players we usually think of their batting prowess and fielding skills, though when we get to the mound position we usually just think of how well a player pitches without ever thinking of what else he may contribute to the team. In the case of a list of greatest Presidents, the list a person makes almost invariably depends on his basic political beliefs."

He put the bag aside and dropped some fish in the frying pan. We could hear them sizzle as the smell of lunch filled the office.

"But who would you put on *your* list?" Dave asked.

Mac didn't think but a second and said, "Oh, I guess I'd take most—maybe all—of the first 15 Presidents and put them at or near the top..."

"Who was the 16th President?" I asked.

"Lincoln...and just a few of the post-bellum Presidents from the 19th century like Arthur, Cleveland, McKinley..."



One of the Founding Fathers of the United States, Thomas Jefferson was one of the first Presidents to go beyond the constraints imposed by the Constitution. But rather than increasing the power of the federal government, his intention was to get a European power off the North American continent and to expand the nation itself.

"Postbellum?" I asked.

"Postbellum means after the Civil War—or the War between the States, as it's called in the South. Antebellum means before that war."

"Oh."

"...and I'd add a handful of the Republican Presidents from the 20th century."

"Reagan, Bush..." Dave asked.

"No, not them. Harding, Coolidge, Hoover...that's it, though I'd put Ford higher on the list than any President since Hoover."

"Ford?" Bill asked. "He was a do-nothing President. He was in the House of Representatives for 22 years and he never even introduced a bill."

"What's wrong with that?"

I think we were all a little startled by Mac's response.

"If you want an activist President, you're probably a Democrat," he said, "although you may also be a modern-day Republican. If you want a President who leaves the people alone, you're probably an old-time Republican, a 19th century Democrat, or—and this is more likely—a modern-day Libertarian."

Bill said, "Most intellectuals think guys like Wilson and F.D.R. belong at the top. In fact, I've seen several lists where F.D.R. is at the very top."

"Why do you think he's there?" Mac asked without looking away from the pan.

"Well, he got us out of Hoover's Depression..."

"I don't know why people call it Hoover's Depression," Mac said. "Hoover was President for only three and a half years of the Great Depression while F.D.R. was President for eight of them, right up until the beginning of World War Two, when the Depression 'officially' ended. In fact, under Roosevelt, and in spite of all his programs, the Depression deepened. Five years into his Presidency, in 1938, it was worse than ever. You can't blame that on Hoover; a Democratic President and Democratic Congress had been in power for five years. In fact, many economists have fielded strong arguments that show that F.D.R.'s meddling may have actually made the Depression worse."

"So you base your criteria on how the country is doing economically," Bill said.

"No, although I'll admit I'm a financial conservative. But most of my criteria is based on the Constitution." He started taking the fried fillets out of the pan.

Dave said, "Then your criteria is..." and he hesitated for a second.

"How closely a President adheres to the Constitution," Mac said finishing Dave's sentence for him.

"But I get the impression Lincoln's not on your list," I said.

He shook his head as he lifted some fish from the frying pan with a spatula.

"Come and get it," he said as he took more fillets and dropped them into the hot oil.

"Why isn't he on your list?" I asked.

"Lincoln was the first President to violate the Constitution wholesale. Before him, every President tried to live within its framework.

"What was different about the first 15 Presidents?" Dave asked.

"The first 15 Presidents all operated within the framework of the Constitution—with a few, though noteworthy, exceptions.

"But more importantly, some of those Presidents are unfairly maligned today because they chose to act within the framework of the Constitution."

"Name one," Dave said.

"The one who stands out most is James Buchanan, the President who preceded Lincoln."

"What did he do?"

"It's what he didn't do. He refused to act when South Carolina seceded from the Union. That secession was followed by the secession of the 10 other states after Lincoln was elected,



Another of the Founding Fathers of the United States, John Adams' name will forever be linked with the Alien and Sedition Acts

and they went on to form the Confederacy."

"Why didn't he do something?"

"He said there was no constitutional basis for using force to keep them in the Union. And, actually, he was right."

"So, what did Lincoln do?"

"He threatened military force to stop it."

Lincoln was the first President to violate the Constitution wholesale. Before him, every President tried to live within its framework.

"But he had to," Bill said.

"Why?"

"To free the slaves."

"The Civil War wasn't about slavery; it was about preserving the Union. It wasn't about the Constitution and it wasn't about freedom. And I'm not sure it was worth killing half a million people to keep the country intact just because some wanted to leave. Keep in mind that the South was not a foreign invader."

"That's how many died during the Civil War?" I asked.

"That's the total," Mac replied. "And after hundreds of thousands died to keep it together, there's still nothing in the Constitution that says states can't leave.

"The issue of slavery," he added, "may have helped bring on secession, but it wasn't the reason for the war."

"I think you're wrong," I said. "Everything I learned in school said that war was fought to free the slaves."

He crossed the office and picked up Bartlett's Familiar Quotations and leafed through it. "Might as well quote Lincoln himself," he said. "In a letter to Horace Greeley, editor of the New York Tribune, Lincoln wrote:

My paramount object in this struggle is to save the Union, and it is not either to save or destroy slavery. If I could save

the Union without freeing any slave, I would do it; and if I could save it by freeing all the slaves, I would do it; and if I could save it by freeing some and leaving others alone, I would also do that.

"Ending slavery was a noble purpose, but the war was fought over secession. Had the 11 states that made up the Confederacy not seceded, neither Lincoln nor the Congress would have sent troops into the South to end slavery. Slavery would simply have died its natural death as it did in other countries."

"What about the *Emancipation Proclamation*?" I asked.

"The *Emancipation Proclamation* only freed the slaves in those states under control of the Confederacy. It did not free any of the slaves in the border states where the slaves were owned by Union sympathizers."

"Really?"

"Yes, read it."

"You say he violated the Constitution?" Dave asked.

"He tromped all over the very document that makes this country worthwhile and has made it different from any other country that has ever existed in history."

"Give me some examples," Dave said.

"In creating the state of West Virginia, he violated Article IV, Section 3 of the Constitution which says the federal government cannot form states from the jurisdiction of any of the states without the consent of the state legislature and the Congress.

"The taxes he levied to support the war, and the draft he imposed on the North were unconstitutional.

"The Writ of Habeas Corpus and the Bill of Rights were suspended. He summarily imprisoned critics and even had an arrest warrant written to jail the Chief Justice of the Supreme Court, Roger Taney, because he not only ruled that many of Lincoln's

actions were unconstitutional, he was also a vocal Lincoln critic."

"But these things had to be done; otherwise, the United States wouldn't be as it is now," Bill said.

"Then you would have to say taking land from the Indians, breaking our treaties with them, and the kidnapping of Africans to bring them to this continent as forced, unpaid labor was okay because, without them, the United States wouldn't be what it is today."

He looked out at us for a response. No one responded.

"All you're saying, Bill, is that the ends justify the means. I don't feel that way. Today, most everything unconstitutional the government does, from illegal searches to asset seizures, is based on that concept. Bureaucrats and politicians are pummeling the Constitution, and they excuse themselves by saying they have a noble purpose."

Bill and Dave thought about that one.

"Did he have him arrested?" I asked.

"Taney, the Supreme Court justice?"

I nodded.

"No. But even though the warrant was never executed, the fact remains that it is one more piece of evidence in the argument that Lincoln was nearly a dictator and the first President to flout the Constitution on a grand scale."

"You said some of the early Presidents did violate the Constitution," Dave said.

"Starting with the second President, John Adams. During his administration the Alien and Sedition Acts were passed by a Federalist Congress. Among other things, they made it illegal to criticize the government. The bill was signed by John Adams, a Federalist President, although he signed it reluctantly—and despite the fact that they violated the First Amendment to the Constitution. Historians have vilified him for that, as they should, but it's interesting that many of those historians who put Adams low on their lists when they

rank Presidents, and mention the Alien and Sedition Acts in their criticism of him, don't seem to remember that one of their heroes, Woodrow Wilson, had more than 5,000 Americans jailed for speaking out against World War One. And, if you'll recall, there were efforts to jail critics of the Vietnam War by the Johnson Administration, although that effort was quickly abandoned.

"Neither of those two Presidents is likely to be remembered for those things, at least not by contemporary historians.

"Jefferson was another who violated the constraints placed on the power of the federal government by the Constitution."

All you're saying, Bill, is that the ends justify the means. I don't feel that way. Today, most everything unconstitutional the government does, from illegal searches to asset seizures, is based on that concept. Bureaucrats and politicians are pummeling the Constitution, and they excuse themselves by saying they have a noble purpose.

"He helped write it, didn't he?" Dave asked.

"Actually, he was in France when it was written. But, other than disagreeing with the original version—because it didn't have a Bill of Rights—he agreed with the constraints it imposed on the federal government. But as President, he violated it, or more accurately, he went beyond it."

"What did he do?" Bill asked.

"There were no provisions in the Constitution for using public money to buy the Louisiana Purchase, and many people at the time pointed this out."

"What do you mean?" I asked.



Although considered by many modern historians to have been a weak president, James Buchanan simply operated within the limits of the power granted the President by the Constitution.

"The buying of the Louisiana Purchase from France was unconstitutional."

"It wasn't legal?" Dave asked.

"No.

"Then another who violated the Constitution was James Polk, one of the Presidents I otherwise admire, who unconstitutionally created a fifth cabinet office to go along with the Department of War, the Department of the Treasury, the State Department, and the Attorney General's office."

"Which one did he create?" Dave asked.

"The Department of the Interior."

"Why?"

"To deal with all the land acquired during his administration. The United States annexed more territory during his administration than during the administration of any President before or since. But, by maintaining an Interior Department, this has led to federal ownership of almost 30 percent of the land in the United States. But the Constitution states explicitly that the federal government cannot own land other than the land set aside for the capital, Washington, D.C., and for forts, magazines, arsenals, dockyards, and other things which at the time were called 'needful buildings.'



The last Democratic President to feel obliged to conduct the office of the presidency within constitutional limits, Grover Cleveland annoyed Democratic and Republican Congressmen alike with his insistence that congressional bills be in accordance with the Constitution of the United States.

And all of this land was to be purchased from the states. The federal government has not paid for literally hundreds of millions of acres of land they now lay claim to.

"Now, I'm not saying that this is a good thing or a bad thing. But I am saying it is another example of the federal government ignoring the Constitution when it wants to."

"For the record," Bill asked, "how do you feel about the federal government owning all this land?"

"I'm against it. The Founding Fathers had good reasons for not wanting the federal government to 'own' the country, and I agree with them."

"I thought you'd feel that way. But, for my own edification, what were those reasons?" Bill asked.

"They feared a strong central government because they had already seen that historically wherever the government gained power it was always at the expense of the people."

"What are some of the things early Presidents didn't do because of

Constitutional restraints that Presidents today would do?" Dave asked.

"One example is that, while he served in Congress, James Madison disapproved a \$15,000 appropriation for French refugees, not because he was being stingy or cruel but because he could find nothing in the Constitution that allowed Congress to spend the public's money for something charitable, no matter how well-meaning it was."

"Why would he have to find permission in the Constitution for that?" I asked.

He looked at me surprised. "Anything the federal government does that it is not permitted by the Constitution is unconstitutional because all powers not given explicitly to the people or the states, according to the Tenth Amendment."

"So Madison was just..." Dave hesitated. "...acting within the law."

"That's right. And other Presidents did the same. Franklin Pierce vetoed a bill to help the mentally ill on the same basis Monroe had voted against relief funds while in Congress. And Grover Cleveland vetoed several Congressional spending bills for the same reason, annoying both Republicans and Democrats."

"The Constitution isn't an ironclad document," Bill said. "It's open to interpretation."

"Even though we treat it that way, it's not," Mac said.

"Times are a'changing, Mac, and new problems need new solutions."

"New problems?"

"Yes," Bill said.

"And that means...?"

"We need to interpret the Constitution differently to meet modern problems. The Constitution is a living document."

"First off, let me say I don't think we have new problems, we just have new solutions—and they don't work. We still have hate, poverty, national defense, violation of constitutional

rights, etc. The same problems we've always had.

"Second, a constitution that's open to interpretation is worse than a bad constitution that we stick to. A constitution with fluid meaning has no meaning at all. No citizen can now pick up our Constitution, which was written for the common man, and know what it means because its meaning keeps changing. And in the meantime any branch of Government can now wring an interpretation to its own benefit."

"It also means that the meaning of the Constitution can be changed by reinterpretation alone, which means that it is being amended without the consent of the people or the states. But if you read the Constitution, and the records of debates and what the Founding Fathers wrote, including the Federalist Papers, you will find that they meant the Constitution to be adhered to as strict guidelines."

...a constitution that's open to interpretation is worse than a bad constitution that we stick to. A constitution with fluid meaning has no meaning at all. No citizen can now pick up our Constitution, which was written for the common man, and know what it means because its meaning keeps changing. And in the meantime any branch of Government can now wring an interpretation to its own benefit.

"That sounds good, but I don't think it's practical," Bill persisted.

"Well, look at it this way, Bill. When laws and bureaucratic regulations are enacted, we, the citizens, are expected to obey the letter of the law. We are not allowed to 'interpret' the law for our own ends. But when the government or a bureaucracy doesn't care for the limits on their powers, as

set forth in the Constitution, we no longer hear the phrase, 'in accordance with the letter of the law.' Instead we hear how the Constitution is a living document, and the government, so as to do as it pleases, has only to reinterpret it.

"The early Presidents are no longer respected for acting within the limits set forth in the Constitution, and today Democrats rarely speak of 19th century Democrats as heroes because those Presidents had the embarrassing habits of doing just that.

"Can you imagine if a President today started vetoing all the bills coming out of Congress because they were unconstitutional? Senators and representatives would want to know what the Constitution's got to do with it. Special interests, both liberal and conservative, would be calling for impeachment, and the press and academia would vilify the President.

"However, modern Democrats do pay lip service to admiring Thomas Jefferson and Andrew Jackson, and they often used to call themselves the party of Jefferson and Jackson—but not so much anymore."

"Why not?" I asked.

"Both were proponents of small government. If either could come back today, they would be horrified at what's become of the Democratic Party. And they also would have no kindred feelings toward modern Republicans because the Republicans are going down the same road, albeit with about a 25 year delay.

"Today's Democrats are Democrats in name only; they're actually not what Democrats were, in any sense of the word."

Bill got up and walked around. It was clear he was annoyed with Mac.

"When did it change?" Dave asked.

"At the end of the last century, William Jennings Bryan single-handedly changed the course of the Democratic Party by stepping away from Constitutional law and slipping into a kind of populism that was sweeping the country. Then it changed

again in the 1920s when fascism swept the world."

"How's that?" I asked.

Adopting fascism

"The Democrats—and, since the 1950s, the Republicans—adopted fascist policies."

"Oh, come on," Bill said. "Are you saying the Democrats are Fascists? Fascists are right wingers."

"Despite the fact we identify fascism with Hitler and Mussolini, they were just two people among many who embraced fascist policies."

"What is fascism?" I asked

"If you look at capitalism as the concept of private ownership, and communism as no private ownership with everything owned by the state, fascism recognizes private ownership but the use of private property is directed by the state."

"Can you give us a concrete example?" Dave asked.

"The environmentalists wanting the state to direct the use of industry and private property is a fascist concept," Mac said.

Bill slammed his hand on the table. "You're saying the environmental movement is a fascist movement?"

"If the word fascist bothers you, Bill, and it is now a word that carries a lot of emotional baggage because of the Nazis, then substitute another word, but the philosophy is the same.

"I believe that if it hadn't been for Hitler, today's bureaucrats and politicians would have no problem admitting the use of fascist policies. Before World War Two, men like F.D.R. and Winston Churchill openly admired Benito Mussolini and his fascist government. What they admired was the economics of fascism and its approach to property rights."

Bill just shook his head, but Dave said, "When the Clintons first took office..."

"Only one of them did," Mac said and Dave laughed.

"Okay, when Bill did, they wanted to institute a national health plan and explained it would be managed competition. Is that fascism?"

"That's right."

"Fascism is about zero tolerance and persecution," Bill said.

"Fascism is just an economic theory, Bill. It's not about concentration camps any more than communism is about gulags and Siberia. Hitler didn't need fascism any more than Stalin or the Khmer Rouge in Cambodia needed communism to carry out their atrocities."

"Oh, come on," Bill said. "You can't expect me to believe they just changed the definition of the word and nobody noticed."

"That's what's happened. I don't know why you're having trouble with it. It's happening again with another word right here in the 1990s and no one I know of, not in the press, in the colleges, or in Washington has cared to comment on it."

We waited expectantly until Dave asked, "What's the word?"



Whether for good or bad, Abraham Lincoln, the first Republican President, ruled the nation through the bitter years of the Civil War as almost a virtual dictator, and limits imposed by the Constitution were ignored.



Considered by many modern scholars to be the greatest President in American history, FDR's opinion of the Constitution was that it was an archaic document suitable only for the days of horses and buggies.

"The Communists in the old Soviet Union were, for 70 years, thought to be comprised of left wingers. Even after the Soviet Union fell apart, the Communists in Russia were considered on the left. But they suddenly became right wingers, in the eyes of our own liberal press and in the eyes of most Democrats, when they opposed democratic elections, something Communists had done even when they were called left wingers."

"I remember that," Dave said. "They were described as right wingers then in just about every major newspaper in this country."

"That's right, but they hadn't changed any of their political beliefs. When I heard it," Mac went on, "I expected someone to question it. But as the days passed, I began to feel like Winston Smith, the main character in George Orwell's 1984, when he is in the square in the city called Airstrip One, which is present day London, listening to a speech by one of the party leaders. There are flags of the allies flying around the square and the speaker even mentions those allies by name and calls them friends. And he berates the enemy by name. But suddenly, in the middle of his speech, he

points to the flags and screams that those are the flags of the enemy, and the enemy he was just berating he screams are our allies and the crowd goes right along with it. Smith screams his outrage along with the crowd, but in his mind he's wondering how such a charade went over so easily.

"So, when the press suddenly started referring to the Communists as 'right wingers,' and no one seemed to notice that just days before they were left wingers, I started to feel as though Orwell wasn't just a novelist, but a prophet.

"Today politicians, particularly those in Washington, D.C., feel as though constitutional restrictions on federal power no longer apply.

"I just read a column by the economist Walter Williams in which he alluded to a case being heard before the Supreme Court in which Associate Justice Scalia asked the Justice Department's solicitor general if he could name any activities or programs that Congress would consider to be contrary to the spirit or intent of the Constitution. This guy, a Clinton appointee, a government official, couldn't think of even one. I don't know how you feel about something like that, but I find it scary stuff. But it's typical of the way government officials, both elected and appointed, feel about the Constitution—they simply don't feel impeded by it in any way.

"So, what if you had to make a list where you rated the Presidents? What would it look like?" Dave asked.

"I'd organize my list in five tiers, with the top tier being the Presidents I thought were the best in maintaining the values we find in the Constitution, and the bottom tier being those who 'took the law into their own hands.'

"In each tier, I'll just list the Presidents chronologically:

"On the first tier I would put almost any one of the first 15 Presidents, and a few others. This would include:

George Washington
Thomas Jefferson
James Madison
James Monroe
John Quincy Adams
Andrew Jackson
Martin Van Buren
John Tyler
James Polk
Zachary Taylor
Millard Fillmore
Franklin Pierce
James Buchanan
Rutherford Hayes
James Garfield
Chester Arthur
Grover Cleveland
Benjamin Harrison
William McKinley
Warren Harding
Calvin Coolidge
Herbert Hoover
Howard Taft

"On the second tier I'd put:

John Adams
Andrew Johnson
Ulysses Grant

"On the third I'd put:

Harry Truman
John Kennedy
Gerald Ford

On the fourth:

Theodore Roosevelt
Woodrow Wilson
Dwight Eisenhower
Lyndon Johnson
Richard Nixon
Jimmy Carter
Ronald Reagan
George Bush
Bill Clinton

"And at the bottom I'd put:

Abraham Lincoln
Franklin Roosevelt

"Did you leave anyone out?"

"One. I didn't bother including William Henry Harrison because he got sick at his inauguration and died a month later."

"Is that list set in stone?" Dave asked.

"No, I might move one or another of the Presidents up or down a notch as I learn more about them. But I can't imagine any one of them jumping two notches."

"I'd just about turn your list upside down," Bill said.

"That's fine, as long as you understand the criteria you're using."

"Are there any solutions? Anything that would make this a constitutional government again?" I asked.

Mac shrugged. "The real solution would be for the people to demand the Constitution be adhered to, to the letter of the law. And then, if the Constitution proves unworkable, let's change it according to the rules instead of just ignoring it."

"And," he continued, "There's a bill before Congress now..." he looked up at the ceiling, "...HR 2270, that would require Congress to specify the source or authority under the Constitution before they could enact any law."

"Would that solve the problem?"

He laughed. "I doubt it will be passed into law. And, even if it is, it'll probably be ignored. The citizens of the United States are getting the government they deserve. The problem is that I'm also getting the government they deserve."

Dave laughed.

Bill moped.

"Boy, we've come a long way from baseball," I said.

"Not really," Mac said.

"What do you mean?"

"Well, when told he made more money than President Hoover, Babe Ruth didn't bat an eye. He said, 'I had a better year.'"

He dropped more fish into the hot oil. Δ

Compost the "quickie" way

By Lynn Gordon Stetser, Jr.

Some natural or organic gardeners make much to do about their secret formulas for producing compost. Generally, the carefully guarded recipes in question involve special activators and the backbreaking turning and stirring on a regular schedule of tons of decomposing matter.

Beansoup! Compost is nothing but decayed plant and animal matter that is spread on a garden in place of chemical fertilizers and growth stimulators. It's the simplest and most natural thing in the world and, left to its own devices, makes itself. The best you and I should hope to do is assemble an optimum set of ingredients for a royally rich batch of natural fertilizer, throw 'em all together, and let Mother Nature do the rest.

The more variety in your compost pile, the better: grass clippings, kitchen trimmings, leftovers (no meat), coffee grounds, wood ashes, weeds, straw, hair clippings, and scraps of old cotton or woolen fabrics all fit into a humus heap just fine. Spent hops from a brewery and seaweed pulled from the ocean add to any natural fertilizer pile, as do rabbit, goat, cow, poultry, pig, sheep, and horse manures. A special tip worth looking into: many big city stables and race tracks gladly give horse manure away free to anyone who will haul it away.

Additional composting candidates include leaves, cornstalks, tomato vines, twigs, branches, and sawdust. But it's only logical to shred such tough or bulky matter for the best results. You'll also find your heap of humus decomposes more rapidly if you leave whole bones, grease, animal fat, and meat out entirely. They'll break down eventually, of course, but the idea here

is to produce finished natural fertilizer in the shortest possible time.

Now, pace off a five-by-five foot square in an out-of-the-way sunny corner of your property, and spade up the soil to expose the bacteria that live there. Then start forking one six-inch layer of organic material on top of another until the stack is about five feet tall. The order and mixing of the ingredients is not important but you should water each tier as you lay it down. A sprinkling of ground limestone, rock phosphate, or potash rock on every layer will improve the quality of the finished fertilizer.

Cover the completed pile with a sheet of black plastic and anchor the tarp around the bottom with bricks or rocks. The plastic will hold the moisture in, protect the nutrients in the heap from rain, and speed the composting process by absorbing the sun's heat. Now go away and forget your pile for about 10 days. When you come back, the decomposing humus should be registering between 130 and 160 degrees Fahrenheit. That's great. If it isn't heating, it needs more nitrogen. Add more limestone if the pile starts to smell foul.

You may want to turn the heap after two or three weeks, just to check its progress. If the center of the stack has not completely broken down by that time, add some nitrogen. Splash more water on the pile if it looks dry. Restack the material "inside out" so that the top and sides become the center, and recover with the black plastic.

Use this "quickie" technique for making compost and you'll have rich, crumbly mulch three months after setting a stack of humus to work-in any but the coldest weather. Compost started in the dead of winter and covered with plastic will probably freeze solid and not start digesting itself at all until spring. Δ

Figs—the healthy biblical fruit

By Alice Brantley Yeager
(photos by James O. Yeager)

It's fun to introduce someone to a "new" fruit or vegetable and instantly see that they really like it. Not everyone can have the luxury of enjoying freshly picked figs, but those of us who have our own fig trees feel lucky indeed. It's a high point of the day when we hear, "Say, this is good! I didn't know a fresh fig would taste like this." (Used to Fig Newtons, no doubt).

Fig trees are door-yard dwellers in the South wherever winter temperatures do not consistently drop below 15 degrees F. During those infrequent times when several days of 10 degrees F., or less is recorded, trees will suffer severe damage even to the extent of being killed back to ground level. When that occurs trees will recover slowly by sprouting several new trunks when the ground has thoroughly warmed up. These should appear by early summer. Dead parts may then be removed, but precaution should be taken not to be too hasty about pruning. Fig trees need plenty of time to show signs of life after having undergone a rough winter.

New growth should be pruned to leave two or three of the best trunks. Some owners thin back to one, but I

have found that the established root system will easily support more than one trunk. Trees should begin to put on a sizable crop in about three years.

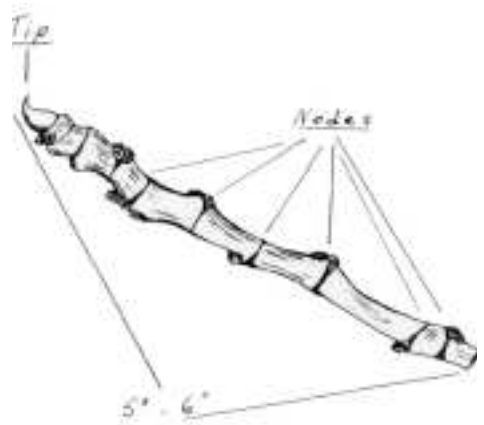
Fig trees are not limited to the South as they may be grown in colder climates if precautions are taken to protect them. Some northern gardeners dig their trees in late fall, keep large balls of earth around the roots and winter them in a cellar. The dirt is not allowed to completely dry out and plants are set outdoors again when weather has settled in spring. Another method is to grow the plant in a large, easily moved container that may be shifted indoors when temperatures begin to plunge.

If a gardener has room for a fig tree in a greenhouse, more than one crop per year may be expected. Branches trained horizontally can save space and the protection afforded by the greenhouse will increase fig production.

Varieties of figs grown in the South are mainly Celeste, Brown Turkey and Texas Everbearing. The first two are heavy producers of sweet-as-sugar fruit and a mature tree will give its owner an abundance of figs.

Texas Everbearing produces figs as large as small pears and they are not quite as sweet as the smaller figs. However the tree has the advantage of

bearing from early summer to autumn thus stretching the season for fig lovers. A curious thing about Texas Everbearing is that it will produce some very large figs at the very beginning of the season while the younger figs are forming. These first figs are

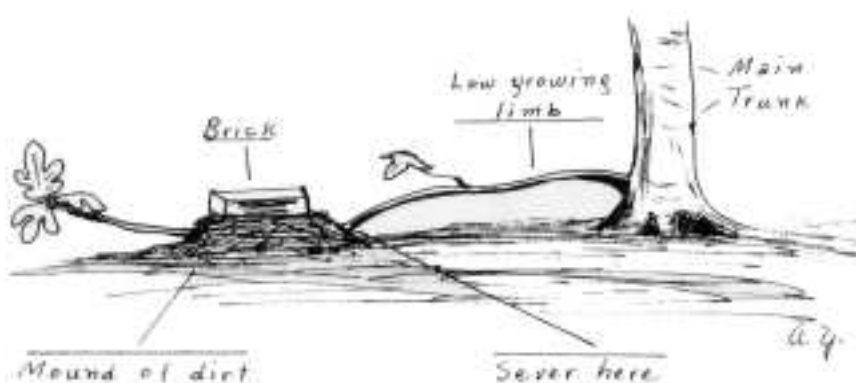


When taking a fig cutting, cut at the nodes.

watched with anticipation as they will give us the first taste of the season. After they are gone, the tree will bear in a normal way.

California is a big producer of figs as the commercial Smyrna fig is grown there. Thousands of pounds of Smyrna figs are dried and marketed annually. By contrast, it is rare to find Southern figs in the marketplace as they ripen fast, bruise easily and, therefore, do not ship well. Southern figs are best eaten fresh from the trees or made into tasty jams and preserves (See recipe). They may also be dried and kept in clean sealed jars in the pantry or freezer.

Propagating fig trees is easy. If you have a friend or neighbor who has a fig tree, ask for a few cuttings before sap rises in spring. Select mature, strong-looking branch tips and cut them 5 or 6 inches long. (It's well to have more than one cutting in case some fail, as you'll have to wait another year to try again.) Cut all the way around the first few nodes of the branch tips with a sharp knife, being careful to split only the thin outer bark. (See illustration.)



You can produce another fig tree by using simple layering.



In the north, fig trees may be grown outside in movable containers during summer and transferred indoors whenever cold weather begins.

Place the cuttings upright in well pulverized soil with only an inch of the tips protruding. Cuttings may be started in deep, ten inch pots or set directly where trees are to remain. If set in their permanent spots, be sure to protect them with noticeable stakes or wire to insure their safety.

Another method of propagation is by simple layering. Trees will often produce limbs low to the ground and it is very easy just to loosen the dirt a bit, bend the limb so that some of the nodes touch the ground, pile some dirt on it and secure it with a heavy object such as a brick. (See illustration.) This should be done after tree has leafed out. By the end of the season, the limb should be rooted. Early in spring, during dormancy, cut the limb loose where it enters the dirt and, presto, you have a new tree! The young tree may also be severed from the parent tree in late fall but should be wintered over in a good size pot, kept moist and protected from hard freezes.

Fig trees don't seem to be very particular as to soil just so that it is not too poor and is moderately moist. Although they will tolerate some shade, fig trees do not need to be over-

shadowed by large trees such as elms or oaks. If there are medium height fruit trees nearby--pears, peaches, etc.--fig trees need to be located 20 - 25 feet away from them as figs do best where they can have full benefit of sun and rain. Southern fig trees are of a spreading nature averaging about 8 - 9 feet tall and spreading out wider than they are tall.

Guidelines for planting a fig tree are very much like those for planting many other trees. Always make the hold larger than root-span and thoroughly pulverize dirt to be used. Set tree a little lower than previous soil line, spread out the roots, fill in halfway with loose dirt and water thoroughly. Finish filling in hole and again water generously. This will get rid of any air pockets and settle soil around roots. If you live in a drought prone area, make a small dam about 18 inches in diameter around the tree to help direct water to its roots when watering becomes necessary. If no complications arise, the tree should bear its first figs in three years.

Fig trees develop a heavy network of roots just under the surface of the ground, so it is best not to do a lot of tilling around them. Just keep the area free of grass and weeds. During early spring an occasional dressing of well rotted barnyard manure or compost is

beneficial. A good organic mulch of leaves, grass clippings, etc., will deter weed growth and conserve moisture.

It is imperative that fig trees have plenty of moisture especially while fruiting. If soil is suspected of drying out during long periods of no rain, soil should be thoroughly soaked under trees at least twice a week. When green figs begin to shrivel and drop off, it is too late to save the crop. About all the owner can do then is to provide the trees with enough moisture to get them through the drought. Forget about the fruit.

Some folks advocate the use of old newspapers and magazines as a mulch and also as a means to having a nice clean area underneath the trees. I have tried this and found that it creates more problems than it is worth. Light showers do not penetrate the papers thus keeping moisture away from the soil and a haven is created for sow bugs, snails and other pests. There is the inevitable clean-up job when papers get blown around during windy periods.

Generally speaking, the fig tree is a boon to the gardener. It is disease-free, requires little care and surplus figs find a ready market when the owner places a sign out front. If "pick-your-own" is the order of the day, be sure that the pickers don't damage the



Sweet-as-sugar Brown Turkey figs almost ready to be picked



This basket of ripe Brown Turkey figs may be enjoyed fresh or put away in a number of ways to be used later. Figs have high nutritional value and should be eaten fresh in season whenever possible. The drying of figs does not inhibit their health value.

tree(s) by bending the limbs down too far or by jerking on them. Also be sure that they know the difference between figs that are ripe and those that need to hang on a day or two longer. If there is a tint of green still lingering, the fruit needs to stay on the tree. Also, if the stem of the fig has not yet begun to droop, it is still in the ripening stage. A ripe fig will come loose from the branch easily and there will be no trace of the milky sap.

An interesting thing about the fruit of the fig tree is that the ripe fig is actually a hollow, fleshy receptacle which, when turned inside out, shows to be lined with tiny, pistillate flowers which have matured into small drupes. The opening pore at the end of the fig opposite the stem end is lined with the staminate flowers. Technically, I suppose this means that one actually eats a bunch of flowers while enjoying a fig!

If you have room for only one fig tree and there is no other in your neighborhood, don't despair as to pollination. With the exception of the Smyrna fig which requires the ser-

vices of the parasitic fig-wasp, fig trees are self-pollinating.

A fig tree is a very good investment healthwise as its fruits are high in minerals and other nutritional benefits. When we have a heavy fig crop, we often dehydrate some of the fruit in our electric dehydrator and store it for use in recipes calling for dried fruit. The process is simple. Wash and drain figs discarding stems. Split each fig in half lengthwise and lay split side up on dehydrator trays. Set temperature at 130 degrees F., and allow to dry 12-15 hours -- maybe more if fruit is very juicy. Figs will be leathery in texture when finished and may be stored in sealed clean jars indefinitely.

Figs have been around a long time giving sustenance to Earth's creatures. The fig tree is mentioned several times in the Bible, one of the familiar quotations being from the Prophet Micah - "but they shall sit every man under his vine and under his fig tree." — a perfect description of a personal state of peace and plenty.

Fig leaves are useful too. Remember Adam and Eve?

Sources for fig trees

Stark Bros., P. O. Box 10, Louisiana, MO 63353; Henry Field's Seed & Nursery Co., 415 North Burnett, Shenandoah, IA 51602; Johnson Nursery, Rt. 5, BX. 29-J, Hwy. 52-E, Ellijay, GA 30540; Park Seed Co., 1 Parkton Avenue, Greenwood, SC 29647; Gurney's Seed & Nursery Co., 110 Capital Street, Yankton, SD 57079

Fig preserves

1 lb. small figs (Brown Turkey, Celeste, etc.)
$\frac{3}{4}$ lb. sugar
Juice of $\frac{1}{2}$ lemon (optional)
$\frac{1}{2}$ lemon thinly sliced (optional)

Wash figs. Discard stems and remove any blemishes such as twig damage. (Some recipes state to peel figs, but we only peel large figs such as Texas Everbearing.)

Cut figs in half lengthwise and put in stainless steel or porcelain bowl. (Do not use aluminum.) Mix with sugar, cover and let sit overnight in refrigerator to form juice.

Cook in heavy bottom saucepan over low heat until mixture thickens. If using lemon juice and slices, add them to figs when mixture starts to boil. Be sure to stir frequently with wooden spoon to keep figs from sticking. When mixture thickens and desired consistency is reached, spoon immediately into hot, sterilized jars and seal with clean lids and rings that have been standing in hot water. To avoid drafts on hot jars, cover them with a kitchen towel until cooled. When contents have cooled check to see that all lids have popped down. Jars have not sealed if lids are puffed up and are springy to the touch.

Fig preserves are delicious at any time of year, but I believe we appreciate ours most in winter when we have hot biscuits served with butter and preserves. Δ

Want great charcoal? Make your own

By Robert L. Williams

When it's time to grill a steak or some chops at our house, the plan of action is always the same. We invite the guests, prepare the food for the grill, then discover we are out of charcoal and lighter. So, everything has to be put on hold until we make a dash to the store, plunk down several dollars, and in the process use an hour or two of our time.

This is the type of mini-crisis that prompted me to start making my own charcoal. I, of course, had no idea how to begin, but then it occurred to me that any time you build a campfire and then cover it with dirt to smother it, when you rake through the dirt hours or days later you find the charcoal remains of firewood. You have doubtless noticed that this already-burned wood will ignite instantly and burn without a flame or much smoke and will last for a long time.

Using this basic principle, I realized that really all I needed to do was cut wood into proper sizes, start it to flaming fully, then smother the flame,



Start by selecting a limb or branch or, in the case shown above, a slab of oak left over from a lumber-cutting project, and then cut the wood into two-inch sections. For best charcoal use hickory, oak, or similar hardwoods.

and by doing so I could carbonize the wood—and the result would be almost instant charcoal.

So why not make your own rather than pay the price for the material sold in stores? In a couple of hours you can make all the charcoal you are likely to want or need for the coming year.

Start with the proper wood. All wood emits an odor or aroma of some sort when it is burning, and some of these are pleasant to smell, but they are not aromas you associate with hamburgers or steaks. Pine, for instance, smells great on a campfire, but it adds a pungent taste to food cooked over the fire. The same is true for nearly all evergreens or needle-bearing trees.

Poplar has a pleasant smell, but it does not last long and has a tendency to blaze too high for good charcoal cooking. Oak and hickory are both terrific, and I found that if I mix oak and hickory, almost half-and-half, then add two or three pieces of poplar charcoal, I have a cooking mixture that will last for an hour or two and can be replenished readily if the coals start to burn out.

Once you have settled on your wood, cut it into suitable sizes or blocks. I found that an oak or hickory limb eight or ten inches in circumference works beautifully. If the limb is slightly smaller, it will work equally well.

I try to cut blocks that are roughly the size of a baseball or tennis ball. If the limb is smaller than what I want, I simply cut longer blocks. If a limb is



When you have a good load of charcoal material, either dig a hole and build a fire in it, or use some large metal container such as this dilapidated wheelbarrow shown above. Dump in the lengths of wood and then use charcoal lighter to start the fire.

You can also build a fire with kindling and small limbs until you have a roaring fire. Let the fire blaze until every piece of potential charcoal has burned fully on all sides. You may need to turn or move some pieces to get full exposure to the fire.

very large, I cut two-inch slices from the limb and wind up with charcoal the size of a salad plate and two inches thick. This size works incredibly well, because you can lay four or five pieces across the grill and they will cook steaks, chicken, and other quick dishes in a remarkably short time.

Do not try to use green wood. Your charcoal base should be well dried in two ways: it should not be sappy, but it also should not be wet from rainfall.

You can make charcoal in the fireplace inside your house, or you can do it in a variety of ways outside. Start with the outside work area first. The simplest method is to dig a hole in soft dirt (in the garden, for example) about two feet deep and two or three feet wide.



As the charcoal briquettes are fully burned on the outside, use metal tongs to place them in a second container, or drop the pieces into a fire pit where carbonizing action occurs.

Start a fire in the bottom of the pit using pine twigs or scrap wood. Build up the fire until it is roaring. When it is ready, toss in the wood blocks, one at a time, so that you can place them strategically so that you do not put out the fire. Neither do you want the blocks to roll off into a corner where the fire will not reach them successfully.

Don't stack the blocks of wood so deep that the fire cannot ignite the surface. Let the blocks stay in the fire until they are fully burning on all sides, then shovel dirt onto the fire and smother it. You are now carbonizing the wood by cutting off oxygen. Leave the wood under the dirt for an hour or longer. You can go cut firewood or run errands, and when you come back the charcoal will be ready.

Use a shovel to empty the hole. You will find gray or black blocks of wood that are now ready to use. Use tongs or thick gloves to pick up the blocks and drop them into a safe container, such as a metal bucket. Put a lid on the bucket and leave it outside until it cools completely. Your charcoal is now ready to use.

If you don't want to dig a hole in your garden, you can use your charcoal grill, a metal bucket, or anything else that will be fireproof and easily handled. A huge metal barrel works well.

Build your fire in the barrel or bucket, and when it is roaring, drop in the blocks of wood. Again, leave the blocks in the fire until they are burning fully. Then use tongs to lift the blocks from the fire and place them in a metal container. When the bucket is full, close off the air to the charcoal until the container is cool.

If you want to make charcoal in the fireplace, wait until some day or evening when you want a fire anyhow. When you have a good bed of coals, drop the blocks of wood onto the coals and let them blaze fully as before. Use tongs to take out the completed charcoal and drop it into a metal bucket and place the lid on the bucket. Carry the bucket outside when it is filled and set it on a safe surface where heat from the bucket cannot cause a fire.

Now it's time to cook with the charcoal you have made. You will find that you can use commercial charcoal lighter, but if you have let the wood char enough, you will find that you can lay some crumpled newspaper in the fire area of your grill, lay the blocks on the newspaper, and light the paper. When the newspaper has burned, the charcoal will have started to turn gray. Let it turn completely gray before you put the food on to cook.

Grill as you normally would, and when the food is ready use the tongs again, place the charcoal pieces into a metal container, and seal off the air as before. You will find that you can use larger

charcoal chunks again and again. And the more you use the charcoal, the easier it lights and the better it flavors the food.

You may also find that you can light the charcoal with only a match. Stack the charcoal in the shape of a pyramid, then light two or three of the bottom pieces. The heat from these first pieces will ignite the others and soon you will have a great bed of charcoal.

If you find that your charcoal does not burn readily, or if it gives off a sharp-smelling smoke, you did not let it burn long enough before you carbonized it. If, in the grill, it bursts into flame rather than chars, your wood is not dense enough (such as poplar) and you need a heavier wood. Or perhaps you let it burn too long before you carbonized it.

As with all such projects, it is often best to try your hand at charcoal making with a small batch at first. Then, if you like the results, make larger amounts.

Once you have mastered the simple fundamentals of the process, you can make charcoal once or twice a year.

There's only one other part of the process. Call me just as you put on the steaks, and I'll be there by the time mine is medium-rare. Δ



To use the charcoal place it in a grill as you normally would and use either charcoal lighter or crumpled newspaper to light it. You will find that well-prepared charcoal starts much faster than typical commercial charcoal does and burns hotter with less smoke. The charcoal shown above took only two or three minutes to turn gray, and the smoking stopped in about five minutes.

Make mead the easy way

By Carl W. Bussjaeger

When I first seriously considered learning to make my own beer and wine, I was rather isolated from other knowledgeable brewers. As a result, I turned to my usual source of information: books.

Oddly enough, this proved to be a mistake. I had been told that brewing was simple; these books claimed otherwise. I wanted a simple process from which I could learn. Instead, I got a discourse on single and multi-row grains, the chemistry of various malting processes, the acidity of hops, the biology of yeast, and lists of recommended chemical additives. Additives?! Bleah. This was one reason I wanted to make my own.

Basically, the books I happened to stumble upon told me that there was no way I was going to learn the art of fermenting beverages on my own. So I gave up for several years.

Fortunately, I was not completely daunted, and I looked into it again later. I was still on my own; but this time I was equipped with the knowledge that I could at least fake my way through anything. So I tried, and discovered that brewing is not that tough, at least at the entry level.

A typical set of starter instructions for mead follows. This is not a fancy beverage and it does not take long to make.

Carl's quick mead:

Mead can be nothing more than diluted honey, with yeast added. But it is simple enough to enhance its flavor with commonly available items.

Equipment:

1 large pot (should hold 2-3 gallons), preferably stainless steel or enamel.

Siphon tube
2-3 two-liter soda bottles.

Ingredients:

48 ounces of honey
2 lemons
6 teaspoons of ground cinnamon
1 gallon of water
1 oz. yeast—any live brewers yeast will suffice for this. Find a brewers supply house, use the sediment from a homebrew, or borrow some from another brewer.

First, to get your yeast ready, dissolve about half a teaspoon of honey into half a cup of lukewarm water, then add the yeast and cover the container.

Next, skin the yellow outer layer of the washed lemons off, and add it to the water. Squeeze the juice from the lemons into the water. Then toss in the cinnamon. Boil this for 20 minutes. Turn off the heat. When the boil stops, stir in the honey, dissolving well. Let it cool to room temperature, then add the yeast. Keep the pot covered.

In the most basic system, you can let your "must" (the word for unfermented mead or wine) ferment in the same pot you mixed it in. Or you could transfer it to some other container—white food-grade, plastic buckets are popular, as are 2 and 3-liter soda bottles. If you use the pot or a bucket, cover it with plastic wrap to seal out air. If you use bottles, you can stretch small balloons over the bottle mouths. In either case, you may have to make a pin hole in the cover: the fermenting must produces carbon dioxide gas; the pressure buildup can cause the plastic wrap or balloon to pop off if some pressure cannot escape.

It may take a day or two, but the yeast will start converting the sugar in the honey into alcohol—you will see your plastic wrap or balloon start to

inflate. This is when you may have to prick a small pinhole in the cover.

The time needed to ferment the must varies—temperature, type of yeast, and amount of sugar all have an effect. If fermentation seems to stop (the balloon or plastic deflates) after only a few days, slosh or stir the must a bit. This may restart fermentation. Most likely, fermentation will be complete after 10 to 14 days. When the cover deflates and stays deflated, it is time to bottle your mead.

Bottling is easy enough: you just siphon the mead from the fermentation container into bottles, being careful not to disturb or suck up the sediment at the bottom of the pot. This is called racking. Fill the bottles up to about one inch from the bottom of the bottle neck, then cap tightly. Store the bottles in a cool, dark place for about one month. You will then have a nice, light, slightly sweet mead. I find it suitable for just about any occasion that would also suit beer or a white wine.

There is one very important factor to observe throughout the entire brewing process: sanitation. Brewing and vinting is based on near-supersaturated sugar solutions. These solutions are perfect mediums for breeding bacterial cultures. So everything must be kept clean. Wash everything carefully before starting: the pot, fermentation containers, siphon tube, and bottles. After washing, sterilize all the items. A teaspoon of ordinary bleach to a gallon of water works wonders. After sterilization, rinse everything carefully, and store in a clean place till each item is called for. Sterilization should be done just prior to the item's use.

But despite your best efforts, if you stick to brewing and vinting, eventually you will get a contaminated batch. Things to watch for are "mold" at the top of the beverage in the bottle, cloudy 'veils' floating in the bottles, or a rotten smell when opened. If you have doubts, assume contamination and dispose of it. Δ

The dangers of civilization

By T L. Couch

Some might say we spend too much of our time up in the hills. We don't have television. The only radio station we get is uninformative. And the only time we see a newspaper is when we make one of our seldom-as-possible trips to town.

Sometimes even I begin to wonder what's going on in the world at large. I start to think maybe we're missing out on something by being so reclusive and out of touch. I get to thinking that maybe we should be more social and outgoing. Thankfully, before my thinking gets too deranged something happens to set me straight again. Like today.

My mountain missus and I made one of those seldom-as-possible trips to town. There are some things you just can't get by without, and we refuse to destroy a perfectly good book no matter how just the cause. I should point out that the town we go to as seldom as possible boasts a population of only about 5,000 people. Not exactly a raging metropolis. (We did go to Denver once, and we were both very careful not to leave anything there so we wouldn't have to go back.) Still, when you live up in the mountains, just the two of us, and the only reminder of civilization is the occasional hunter knocking on your door just before dark and wanting to know where he is and how to get back to where he was, even a small city can be intimidating.

We had made our usual rounds-the post office, the grocery store, and the bank without much real incident. We had fielded the usual comments from friends and acquaintances such as "Where have you two been? We thought you must have moved away or died up there and nobody had found you yet." We had been in town over

an hour and we were both beginning to feel a little claustrophobic. We were stopped at the intersection. A right turn would head us toward home. A left would take us towards one last stop. Against the urging of my much wiser wife, I turned left, toward Walmart.

We made our way down through the crowded rows of cars and trucks, and as we made the turn in front of the store to start up the next row there was an open parking space. Our big long pickup truck wouldn't make the turn on the first try, so I stopped to back up and get a straight shot at it. When I looked in my side mirror there was a car right behind us. Behind the wheel was a young "lady." She looked to be about 16 years old and probably quite cute when she wasn't snarling and hurling profanities. She eventually backed up and made room for me to continue my efforts to park. It occurred to me of course that she had wanted the parking space that I had taken, and I sat there a moment wondering what sort of emergency situation she might be facing that having to park a few spaces further down might make a difference. I found out later inside the store when I saw her perusing the compact disc selection.

But while I was sitting there contemplating the behavior of this little high school sweetheart, which to me seemed a bit extreme, my ever observant spouse told me a few of the things she had been able to make out on those prettily snarling lips. I assured her that my mother was not a female dog, and that indeed my parents had been married when I was born. Now, wading in over six feet tall and at 200 pounds it had never occurred to me that I might find myself afraid of a petite 16 year old girl half my size, if that, but suddenly

I saw the headlines in tomorrow's paper: "Modern Day Mountain Man Slain by Brutal Tongue Lashing." I wasn't getting out of that truck until the big bully had gone inside.

While I was sitting there waiting until the coast was clear I happened to notice a man in another truck in a parking space in front of us. He was just beginning to back out of the space when another car cruising down the aisle blocked his exit. The car couldn't proceed because of traffic, but that was apparently no excuse. The man in the truck launched into an identical tirade toward the driver of the car as the teenage terror had launched at me. And I would imagine that the driver of the car felt the same way about his parents as I felt about mine. If not for our respect for the sanctity of books my wife and I would have made tracks for the high country like deer on opening day.

We arrived back home in a cloud of dust and with a thankful sigh. As I stood on the deck listening to the gurgle of the creek, the choir of the birds, and the general peacefulness of home it struck me that I could carry a rifle, pistol, knife, or club here in the wilds to protect me from wild animals, but the only time I felt threatened enough to need any of those things was when I had to face the dangers of civilization. Δ

Visit the *Backwoods Home Magazine* website at :

www.backwoodshome.com

Ayoob on firearms

By Massad Ayoob

A cop's advice to those home alone

My police chief Russ Lary and I do our share of TV and radio talk shows discussing public safety and crime prevention. Lightweight Yuppies in the audience are profoundly disturbed when we don't take the usual politically correct route and lie to them about a self defense firearm being 43 times more likely to kill them or someone they love than to protect them.

That oft-quoted figure is a blatant case of lying statistics. The number of times a year that law-abiding private citizens use guns to protect themselves ranges from a high of 2.5 million times annually (a figure extrapolated by criminology professor Gary Kleck) to a *minimum* of 65,000 times a year (a figure conceded to which the most militant gun-banning organization, Handgun Control Incorporated, has publicly conceded). Chief Lary and I and our cops signed on to "protect and serve." Our police department believes that part of that protection and service is teaching them how to protect themselves until we can get there to help them.

This is understood throughout the practice of public emergency services. The fire service in the form of the local fire department sends its trained professionals to schools and civic meetings to teach classes in fire prevention. They stress the importance of smoke alarms, fire extinguishers, and fire drills in keeping people alive in an emergency until the trained professionals can get there to stabilize the situation and get the job done.

The emergency medical service does the same thing. EMTs and paramedics

lecture the public on how to hold the line against life-threatening trauma or medical emergency until the trained and fully equipped professionals can get there to take over. The emphasis is on First Responder training: how to establish an airway, how to do CPR, how to perform the Heimlich Maneuver, etc.

Logically, the police service should do the same thing. Universally, police departments send crime prevention specialists to civic groups and schools for things like the DARE program and advice on locks and alarms and so on, but it has become politically incorrect to teach effective physical force options for surviving lethal assault long enough to call 911.

Russ Lary has been chief of police in the community we serve for a decade. He is widely respected among his peers, and next year will be president of the state association of chiefs of police. He is equally respected in our community, and for the same reasons: uncompromising integrity and honesty. It was with the same integrity and honesty that he included firearms safety and optional deadly force training for those citizens who chose to keep or carry lethal weapons. The training is made available to the public at no charge.

None of the adults who've taken the optional deadly force program has made a mistake with it and become involved in a firearms crime or tragedy. *None* of the kids in public schools that have hosted our firearms safety programs the same way they host the bike safety talks, DARE programs, and Patch the Pony ("Neigh, Neigh, from strangers stay away!")



Massad Ayoob

child safety programs have been involved in any kind of firearms misuse or mishap. It has confirmed for us what common sense told us all along: there is no safety in ignorance. Our program for the armed adults includes advice on how to prevent mistaken identity shootings when they've grabbed a gun before calling police, and our officers arrive immediately thereafter, what has been called "man with a gun syndrome." Many of these citizen graduates have called the police since, and many have accessed their firearms during the crisis, but *none* has even come close to setting the stage for a mistaken identity shooting.

Our community is largely rural, with many backwoods homes. Well over 50% of those homes, we estimate, contain firearms. Our jurisdiction cov-

ers a geographic area larger than many metropolitan cities, but with sparser population and fewer cops. This means that it takes longer for officers to respond to an emergency. We are acutely aware of what can happen between the citizen's first awareness of great danger, and his call to the police, and the responding officers' arrival on the scene. This is why we fulfill our responsibilities as our brothers and sisters do in the fire service, when they teach the use of the fire extinguisher as an emergency safety rescue tool that cuts a lane of safety for yourself and your loved ones until the designated professionals can reach the scene. This is why we fulfill our responsibilities as our brother and sisters in the emergency medical service do, when they teach citizens to do CPR to keep a patient alive until the designated professionals can arrive in the ambulance or rescue vehicle.

Having a fire extinguisher doesn't make you a firefighter, and doesn't mean you don't need firefighters. Having a first aid kit doesn't make you a paramedic, and doesn't mean you don't need emergency medical professionals. Similarly, having a gun

doesn't make you a cop and doesn't mean you no longer need cops.

It's irresponsible to say, "Dial 9-m-m instead of 9-1-1." At the same time, we the police would be irresponsible not to recognize that sometimes, the citizens we serve to protect may need

a 9mm to stay alive long enough to dial 9-1-1.

I was a young patrolman when I responded to a remote riverside home where the husband and wife who lived there were only alive to tell me what had happened because they'd had guns to ward off the crazed intruder. Later, I was more mature, a sergeant, when one of the citizens I had trained through the police department captured a burglar at the point of his shotgun. Today, more than two dozen years since I first pinned on a badge, I don't see it being any different.

The reality is starkly simple. The police can't be everywhere, and the cops know that better than anyone. Our motto is "To Protect and Serve." I can't see that without flashing to an extremely relevant parable: "Give someone a fish, you've fed him for a day; teach him to fish, you've fed him for life."

The police establishment would do well to remember the same: "Protect someone, you've protected him for the moment. Teach him to protect himself, and you've protected him for life." Δ

A country moment



Evan Diesman-McDavid, 3, of Alexandria, KY, rides a Christmas present.

A country moment



Andy Barrett, 3, of Stockton, Missouri, tries out his fishing pole.

Save money by being your own butcher

By Jack Martin

Caring for your meat can be rewarding, fun, and a great way of saving money. For example, I live in southwest Colorado. Prices range from 40 cents a pound for livestock processing to 60 cents a pound for processing wild game. Considering that an average steer will yield 400 pounds of processed meat, and an elk will average 300 to 400 pounds, it is easy to see that there can be a significant expense.

Tools

Tools necessary to process meat are simple and inexpensive. I prefer a good boning knife, a large (12" blade) butcher knife, a sharpening steel, some kind of a meat grinder, and a meat saw. The meat saw may be as simple as a carpenter's saw, a true hand operated meat saw, a hack saw, or even an electric band saw. Myself, I use a band saw that has a 4-inch maximum cut—a very small band saw. Obviously the saws must be clean, and if used also for wood, cleaned before using again. The band saw is the most difficult to

clean, but with a small amount of time, a paint brush, and hot soapy water it isn't too bad.

Preparation after the kill

Few are aware of the benefits of dressing meat properly. Regardless of

removing the hoof section of the legs at the joints. Saw the joints at the foot end of the joint so as to preserve the tendon for hanging the quarter. Place the animal with the head uphill, and tie off the front legs to separate trees. Skin the animal working from the legs

to belly along the hind quarters, working up to where the back rib meets the spine. Use the skin to protect the meat from dirt and debris.

After this section is skinned, remove the tenderloin or "backstrap" (the meat along the spine between the point where the hindquarter meets the backbone and the point where the ribs first meet the backbone) then, using a small hand saw, cut the hind half off. (I prefer a saw made by Stanley, marketed as

a toolbox saw. It is about 14 inches long and cuts like crazy. I have a friend who has a meat saw and prefers this for quartering over his meat saw.) Then, working on meat bags, start at the backbone and work from rear to front to cut this in half and get the hindquarters then hang the meat from a tree, or lay it across a log. Remove the skin on the remainder of the carcass in the same manner, except when splitting in the middle start from the rear and work toward the head. This section will be easier as you already have half the skin to keep a clean work area.

The removal of the skin and quartering also assists in the quick cooling of the meat. Wipe down the body cavity side with clean cold water to get the left over blood off the meat and prevent tainting the flavor. If your climate is such that you can let the quar-



Figure 1. The carcass with shoulder still attached to rib cage. The rope lying on the carcass shows where the cuts occur.

whether it is livestock or wild game the importance of a few minor details will make tremendous differences in the taste of the processed meat. Even gutshot game will not be tainted if the animal is properly cared for. Of

utmost importance is to get the skin off the animal as soon as physically possible. For larger game in the field such as an elk, it is often not possible to hang the animal until it is quartered. Yet, the animal can be skinned on the ground even on a steep hillside among heavy dead fall.

After completing the gutting process (and rolling the unwanted portions downhill from the work area) begin by



Figure 2. The leg and shoulder (center) separated from the rib cage (right) and shank (left). The rope shows approximately where cuts for chuck steaks should be made.



Figure 3. Location of cut along top of the rib cage

ters hang for awhile, by all means do so as it makes the meat more tender but be careful to keep flies off the meat. If you are not going to hang it, butchering can commence as soon as the quarters are at your “butcher shop.”

Butchering

I am not a butcher, and my cuts may be uneven, but I save a lot of money by processing my own meat. I get plenty of steaks, stew meat, roasts, and ground meat. I waste nothing, not



Figure 4. Cuts to process the backbone and neck

even the bones, which are cut into pieces for the dogs. I suggest using a work area that is 30 inches wide by at least 4 feet long, of a substance that is easy to clean frequently. For years I used a leftover piece of Formica counter top with a back splash. Have a wet towel, and a dry one handy at all times. Keep your hands (especially the knife hand) clean and dry. Several large bowls also simplify the process

of setting aside stew meat and the meat I will grind.

I prefer to cut meat that is at 32 degrees, it is easier to cut, and has much less tendency to roll and cause cut fingers. Knives must be sharp and kept sharp. Butcher blocks tend to keep a knife sharper longer, but are expensive.

Also, use a good quality freezer paper

designed for meat. To wrap properly, place the meat in one corner of the paper then bring that corner over the meat in the general direction of the corner diagonal to it. Then roll the meat once toward the diagonal corner. Take the left side of the paper and fold in on the meat, then roll again. If necessary repeat with excess paper on the right, and roll the entire package, using freezer tape to fasten. I mark each kind of animal with a different color so I write less and can identify the type of meat easily in the freezer.

Front quarters

Begin by removing the first section of leg at the joint. Debone this section, and place in

the pile of meat which is to be ground. Remove the front shoulder, boning close to the rib cage (Figures 1 and 2). This can now be cut with either a band saw, or meat saw into chuck steaks, or deboned for stew meat.

Then cut with a saw along the top of the rib cage. Visualize that the backbone

is part of a T-bone steak, and leave about that much rib for an elk sized animal, or visualize a pork chop for a pig or deer sized animal. Cut all along the length up to the neck (Figure 3). Set the backbone portion aside. Next the ribs can be sawn into appropriate sizes for short ribs, or deboned for burger. If you wish you may remove the brisket, or just include it in the processing of stew or ground meat. It has a different striation in the muscle



Figure 5. The hindquarter with pelvis attached

and separates from the rib cage almost without boning.

The strip of backbone and neck can now be processed. Using a saw starting at the rear, cut into steak sized portions until reaching the neck (Figure 4). I use the band saw here, and even though small, sort of roll the meat through the saw to make the cuts. If you must back out, turn off the saw first and allow the blade to stop or else it will cause the blade to come off the wheels. This can also be done with



Figure 6. The hindquarter and pelvis separated

a hand saw, but if you do I suggest you cut the meat with a knife and then the bone with the saw.

The neck can be either deboned, or cut into “chops” for stewing. Boning is a difficult process in the neck, so I usually just cut into chops about 1½” thick for stewing, and save myself a lot of time and effort.

Be sure and remove and discard any bloodshot meat. If not this will taint the meat over time in the freezer.

Rear quarters

Locate the joint at the pelvis and separate the entire hindquarter from the backbone/pelvis section (Figures 5 and 6). Find the pelvic joint at approximately where the top and upright of the “T” join in Figure 5. Cut in the



Figure 8. Where to cut the pelvis into steaks

direction shown parallel to the backbone. Once the whole leg is removed then the meat can be removed. Just beyond the point where the large tendon enters the meat cut into the meat right straight down to the bone. Then follow the bone up toward the cut made to remove from the pelvis.

Next, remove the bone from the other section of meat (Figure 7). These pieces can be cut into roasts, round steaks, or tender stew meat. Generally I just make round steaks after deboning as one piece from the leg bone. You are now left with the pelvis/backbone. Saw this at 90

degrees to the backbone into steaks (Figure 8) in the same manner as for the front backbone section, or debone and cut out the steaks, and use the balance for stew meat. Most of this meat is very tender. Due to the size of the pelvis this can be the most difficult part to saw. Since you are the butcher it is your choice.

Freeze immediately after wrapping and marking. Be aware for a large animal, if you use a small chest freezer it may take a day or two for the meat to fully freeze. Again a reason for having the meat very cool at the time of butchering. I happen to have an extra refrigerator and remove all the shelving to cool the meat prior to butchering. I can get a whole elk into one refrigerator this way by strategically locating the quarters.

Grinding the meat is the most time consuming, and work intensive for me. My grinder is hand operated. For chili, grind the meat through only one time. For normal ground meat, have the meat make two passes through the grinder before packaging. Generally I put all the meat to grind into containers, and keep refrigerated until I have the rest of the meat processed. Some prefer that some pork fat or beef fat is included in the ground meat. If you do, use no more than 25% of fat by weight. I never include the fat as it can make meat rancid, and I don't need the extra weight. If the meat needs oil to cook that is fine, because I can control how much I need, and the type.

Butchering your own meat can be rewarding, can be a family process, and saves money. I can process an entire elk, cow, or buffalo in one day



Figure 7. Where to cut the hindquarter

by myself. With family assistance this can be a half day project. Children can run the grinder, or wrap, and your spouse can assist with the deboning, sharpening of knives, and moving of the heavy quarters. Have a great time, and don't include any fingers in your processed meat. Δ

A country moment



While Hannah Margaret Wright of Hayden Lake, ID, catches a nap in a bucket, Uncle Jerry and retriever Cody garden.

Start your own chicken flock

By Charles A. Sanders

One of the first types of livestock which many homesteaders undertake raising is the chicken. There is certainly no other species of animal more suited nor more beneficial to the homestead than the chicken. Meat, eggs, fertilizer, waste disposal, and pest control are among the qualities of the home flock.

Chickens are generally grouped into three types: meat birds, layers, and dual purpose breeds. When we started out in the poultry business, so to speak, we knew that we wanted dual purpose breeds—ones that would be good eating birds and good layers of brown eggs. We began by looking through the catalogs available from a couple of the reputable hatcheries. Selecting the types of chickens you are going to order is not as easy as it sounds. Out of all the feathered makes and models available, we settled on a dozen each of Silver-laced Wyandottes, Rhode Island Reds, and Buff Orpingtons. We knew that we wanted birds of the heavy breeds, for we were planning to butcher about two-thirds of them, then keep the rest as a small laying flock. We ordered straight run birds. That means that the birds are not sexed, but boxed and shipped just as they come from the incubators. Since we would be butchering most of the birds, anyway, we felt that there should be plenty of layers to pick from for the laying flock. They're cheaper when ordered this way, too,

You have a few other choices in acquiring your birds. In the spring, many feed mills or farmer's co-ops offer low priced chicks when you buy 50 or 100 pounds of chick starter feed. The selection of breeds is generally somewhat limited with these offers,

but they can be a good way to get your starter flock. Be sure, however, that before you take advantage of these deals to find out whether you are getting meat birds or laying breeds. For the record, meat birds put on weight much more quickly than laying type chickens. Be sure that if you are wanting layers, that the chick offer is not for males, or cockerels, only. Some of the large laying bird hatcheries use these chick offers to get rid of the



male chicks which, obviously, they cannot use. Folks at the store should be able to give you the information you need.

The sale barn or auction house is another source of your starter flock. Be aware, though, that many folks come to these sales to get rid of their old hens and burnt-out roosters. Many chicken 'collectors' also frequent these sales and will often run the price up on the more colorful and unusual types of birds. There will, however, probably be several boxes of young pullets and chicks of the more common breeds. Those more common varieties of homestead-type chickens should go at a more reasonable price.

You may also be able to work out a deal with neighbors or friends to provide some starter birds for your flock,

either as mature birds, usually older broody hens and randy roosters, or as newly hatched chicks.

The source I would recommend is the mail-order poultry house. Probably every one of us has seen in our favorite homesteading magazines the advertisements of the large hatcheries. These mail-order hatcheries provide a catalog with a much larger selection of chicken breeds than you will probably find available otherwise. The large hatcheries offer the added benefit of not only providing lively chicks, but can vaccinate them, clip their beaks and generally provide better service. It's their business.

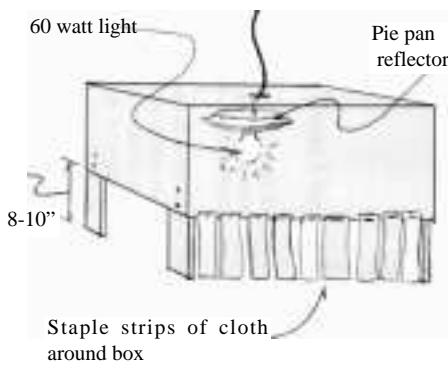
And, as surprising as it may seem, the mail never runs slowly with an order of day-old chicks. Almost without exception, mail-order chicks arrive thriving and peeping away. With chick orders, you will be notified of the shipment date by the hatchery. Then, expect to receive a first-thing-in-the-morning call from the folks at the post office when the birds arrive. You will probably be able to hear the chicks just as soon as you enter the building.

Assuming you are starting with newly hatched mail order chicks, let's look at getting them off to a good start.

Preparing for your birds

Before your order of chicks arrives, be sure that you have all the equipment for brooding them in place and working. When the post office calls for you to come and pick up your box of chicks, there will be little time to hustle around getting things set up.

Have a circular brooding area set up. This can be made from pieces of cardboard, metal, or most any other material as long as it provides a draft-free environment and is tall enough to prevent the lively youngsters from hopping out over the sides. (Think about a few weeks down the road, when the little buggers really begin hopping and



A homemade box brooder

flopping about.). Although many a bunch of chicks has been brooded in a box behind the old kitchen stove, most folks agree that it is important to use a circular area to prevent the chicks from piling up in a corner and suffocating their siblings. We used a large plastic wading pool about 5-6 feet in diameter for our initial brooder area. As recommended by the hatchery, we suspended a 250 watt red heat lamp about 18 inches above the bedding. It worked well until the birds were old enough to turn into the chicken house. The important thing is to introduce your chicks to an environment which is about 90-95 degrees. The heat bulb should be raised about one inch per week (thus lowering the temperature) until the birds are old enough to do without it altogether. A cheap thermometer is needed to help you monitor the temperature in the brooding area. We plan to experiment with lower wattage bulbs and a brooder with our next batch of birds. The important thing is to maintain the 90-95 degree brooding temperature.

A suitably sized brooder box can be placed within your larger circular enclosure and also allow you to use a lower wattage bulb (60 watts or so). This can do the job and save you some money. Use what you have that will get the job done. [see illustration]

Two waterers which screwed onto quart fruit jars provided fresh water for the new chicks. I read once that one of the two waterers should be

filled with milk to help prevent coccidiosis, a bacterial disease. Of course, the nutritional value of the milk should also make the chicks grow much faster, too.

Fresh feed was placed in a small feeder away from the light. A loose top bar on the feeder prevented any chick from roosting atop it and soiling the feed. You can purchase one of these or make one quickly and easily in your workshop.

We fretted, searched, and pored over books and articles to come up with a suitable bedding material for our delicate new charges. We didn't have any of the recommended materials available to us. We finally took the advice of an old Amish farmer at the feed mill and just used ordinary clean straw. It worked very well. Beneath the straw we placed a layer of newspapers and every couple of days the bedding was changed to help keep the chicks thriving and healthy. Other recommended materials include ground corn cobs, wood shavings, rice hulls, or any commercial litter. Do not use sawdust for litter. The chicks will eat it.

When your birds arrive

Immediately upon receiving your shipment of chicks, take each one and dip its beak into the waterer and allow it to drink if it wants. They will most likely be quite thirsty after their journey and this procedure serves not only to give them that needed water, but also to acquaint them with their source of water.

We experienced a bit of a problem with cannibalism among our batch of chicks. Overcrowding or excessive heat is said to contribute or cause this problem. I don't think that either of those were factors in our case. It seems to have occurred with one of the initially weaker birds as the victim. Eventually, even after applications of pine tar to the victim, we ended losing two chicks to cannibalism. To remedy the problem, we used regular toenail clippers to slightly nip

off a bit of the top beak of the survivors and applied a touch or two with a styptic pencil to stem the flow of blood. I do not know if the styptic pencil (alum) was somehow a cause, but we ended up losing a total of four more chicks after the "operation."

Once the young birds had begun getting their primary wing feathers, we were able to move them to the new chicken house. The timing was not so much determined on any particular point in the bird's development but rather the stage of construction of the chicken house. There, the young birds had more room to scratch and run and adjusted quickly. Fresh feed and water were supplied and the same heat bulb was suspended from the rafters.

Upon completing the fenced chicken run, the small sliding door was raised and the chickens were allowed to come and go at will. They soon had removed every piece of greenery from the area and welcomed all grass clippings and kitchen scraps. The first night or two, some of them failed to grasp the concept of going back inside before dark and I checked them to find them huddled in a corner of the pen. I gently tossed them back into the chicken house and after a couple of days, all of them would gravitate back inside as darkness neared.

Chicken house features

One feature which I added to our chicken house, and heartily recommend to anyone building a similar building is a clean-out door. Ours is designed a bit differently due to our site and circumstances, but works well. In one corner of the building, I built in a small door (about 2 ft. by 2 ft.) hinged at the top. Turn buttons keep it closed from the outside. The door, being on the end of the building which is highest off the ground, allows us to move the wheelbarrow directly beneath the opening and shovel the old bedding and manure right into the 'barrow. With the chicken house being directly adjacent to our

garden, it is easy to get the material right onto the ground where it will do the most good.

When I built the roosts, I reverted to some old-time advice. Long ago, I'd been told that sassafras poles used as roosts will help repel mites. Apparently the wood contains oils which help to repel the little critters. If so, fine. If not, they still make great roost poles, for they grow abundantly in thickets and become straight and tall as they stretch and compete for sunlight. The larger ones (2 inches or so at the butt) make the best roost poles. Incidentally, the smaller ones (1-1½ inches) make terrific bean poles. Speaking of mites, we occasionally perform routine maintenance to help prevent or control the little critters. Whenever I scoop out the old litter to be used on the garden, I give the chicken house floor a good sweeping. Once it is good and clean, I go around the perimeter of the whole chicken house floor at the base of the walls and pour a band of ordinary motor oil. I pour more oil on the length of each roost pole. I also sprinkle a foot-wide band of rotenone around the floor perimeter and add a sprinkle or two into the nest boxes when the nest straw is changed.

Nest boxes

Another thing I had given some thought to was how I would make the nest boxes. The answer came when I read somewhere that ordinary 5-gallon plastic buckets could be used for the nests. I cut a couple of support boards to cradle three of the containers in one corner of the chicken house. After tracing the shape needed, I cut three crescents from scrap 1 x 4 stock and nailed them into the opening of the bucket to provide a short banner to keep straw...and eggs ... inside the nest where they belong. A friend I visited later had merely cut the original plastic bucket lid into the same shape and did the same job. Neat. The finished nests were anchored with a cou-



Nests made from 5-gallon buckets with a roost pole in front

ple of nails to the supports. One additional thing I added was a roost pole in front of the boxes, not so much for the birds to rest on as to provide a surface to come and go from.

Good feeding of your flock is an important concern. After the birds are mature, you will need to switch from a growing mash to a laying mash if egg production is your goal. The high-bred hybrid meat birds will be ready to butcher in about 10-12 weeks. Layers should begin production in about 20 weeks or so. This gives you an idea on the time table for switching feeds.

We like to keep our flock confined to the run as much as possible, however, on very hot days, we let them run loose and find shade and scratch where they will. At first we were concerned about the birds raiding the garden, but some improvised fencing took care of the problem before it occurred. Another alternative is to let the chickens out just an hour or so before dark. They will have plenty of time to roam about and scratch and feed, then will mosey back to the chicken house on their own as darkness approaches. That has worked very well for us.

Our intentions from the beginning of the chicken raising project was to get

about three dozen birds, raise them to butchering size, butcher about two dozen and keep the rest of the flock as egg producers for the family. We have ended up with birds in the freezer, and more eggs than we can use. By posting a sign out on the mailbox, we can sell every extra egg that we get. In fact the demand is greater than the supply. We intend to correct this problem next spring when we order some more birds.

Hints and tips

Locate your chicken house as close as practical to your house and barn. If you locate it just an extra 25 feet away than need be, then you will end up putting in about 25 extra miles of walking over a year's time. That equals about eight hours of extra effort.

Pay attention to the shape of the eggs you get. Old-timers say you can predict the sex of the chickens which will hatch from them. Reportedly, the longer eggs will produce rooster chicks and the more rounded ones, hens.

If you have birds which tend to fly out over the top of the chicken yard fence, you can easily remedy the prob-

lem without tying a brick to their leg. Slip in after dark while the birds are on the roost and take up the winged escapee. With a pair of scissors, clip a couple of inches off of the primary wing feathers on one or both wings. The resulting loss of lift should keep the offender grounded.

Chickens need about 14 hours of daylight each day to maintain egg production. We extended egg laying through most of the winter by adding a cheap timer to a 60-75 watt lamp in the chicken house. The timer was set to add a few hours of light each evening to reach the needed 14 hours.

Be absolutely certain to have a good supply of fresh water available for your birds at all times. Failing to do so will squelch your egg production quickly.

Consider putting a capful or two of apple cider vinegar in your chickens' water. It will provide minerals which they need.

If you want to sell eggs, consider getting breeds which produce brown eggs. For some reason, many folks prefer the brown shelled eggs over the white ones. As I tell people when they ask about the difference, I do not know of any difference in the eggs other than the package they come in. But brown eggs do sell well.

Back in 1944, E.B. White gave the following advice for keeping chickens:

1. Be tidy.
2. Be brave.
3. Walk, don't run.
4. Never carry any strange object.
5. Keep Rocks if you are a nervous man.
6. Keep Reds if you are a quiet one.
7. Do all your thinking and planning backwards.
8. Always count your chickens before they are hatched.
9. Tie your shoelaces in a double knot. Δ

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The Ninth Year

Use old newspapers to make your starter pots

By Darlene Polachic

Why spend money buying plant starter packs when you can make all you need from old newspapers? The added benefit of these newspaper pots is that they can be set right into the ground where the paper will eventually decompose and, in the process, the seedling's delicate root system won't be disturbed by transplanting. Paper pots can be placed side-by-side in a cardboard box tray with the sides cut down to about three inches. Amazingly, the newspaper boxes will hold water and remain intact when wet.

Materials Needed:

Double sheets of 17" x 48" (when spread out) newsprint. Use smaller sized publications; most daily newspapers are too big in size to make a nice compact pot). Choose pages without color since the ink may be harmful to both the plant and the soil.

Stapler

Method:

Step 1: Begin with a double sheet of newspaper. Fold in half, making a sharp crease line. (Figure 1)

Step 2: Aligning bottom and top edges, fold in half again. (Figure 2)

Step 3: Bring left side edge to top edge in a diagonal fold. There will be a selvage edge left at right. (Figure 3)

Step 4: Fold selvage edge to back. (Figure 4)

Step 5: Bring right side edge to top edge in a diagonal crease. (Figure 5)

Step 6: Flip over with selvage edge to front. Fold sides forward lengthwise in equal thirds. (Figure 6)

Step 7: Open out and fold bottom and top forward in equal thirds. (Figure 7)

Step 8: Open out (Figure 8) and pleat bottom left corner (1) **inward** along diagonal crease line and fold

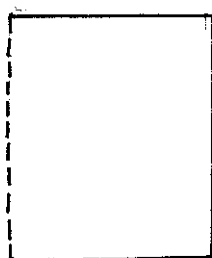


Figure 1

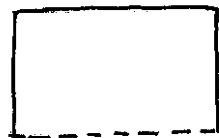


Figure 2

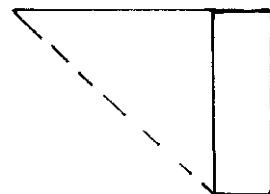


Figure 3

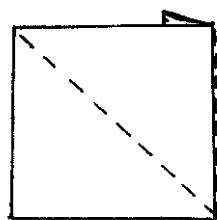


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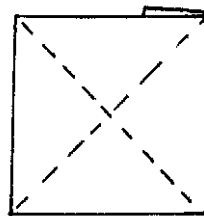


Figure 5

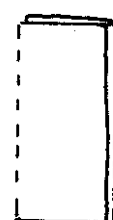


Figure 6

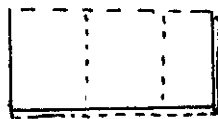


Figure 7

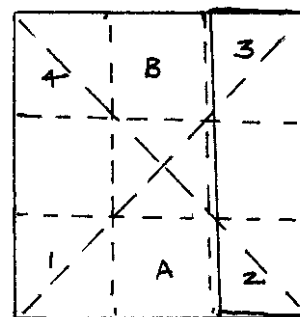


Figure 8

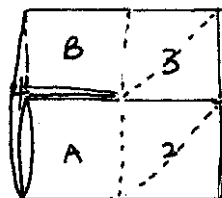


Figure 9

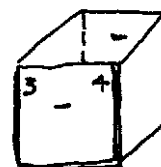


Figure 10

behind front center panel A. Repeat with bottom right corner (2). Staple through all thicknesses at center of A. (Figure 9)

Step 9: Repeat step 8 with top corners and staple to complete pot. (Figure 10)

Step 10: Fill with soil and plant. Δ

Some thoughts on gardener gifts

By Alice Brantley Yeager

The time has come when someone needs to lay diplomacy aside and speak up about the type of gifts (birthday, Mother's Day, Father's Day, Christmas, retirement, etc.) we gardeners would like to receive from well-meaning non-gardening friends and relatives. Not that we green thumb people aren't grateful for the kind thoughts behind every present, but there are times when it would be better if the gift-givers just took us out to lunch. We all know how to savor a good meal. This kind gesture would also spare the giver the agony of perusing superstore gardening departments looking at gadgets and tools he/she knows nothing about. (Most clerks know even less.)

Some folks just follow the line of least resistance when selecting a present for Friend Gardener. They go to **housewares** where there are coffee mugs to fit every occasion from birth to over-the-hill. For gardeners there are all sorts of mugs with birds, posies, and veggies on them and some even have cute sayings—"Gardeners know the latest dirt!" "Come watch my garden grow!" "If you ain't tried gardenin', don't knock it!" Here's where the gift mission can be accomplished in record time. Non-gardeners, pleased as punch with their selection, don't realize they are forcing gardeners to become mug collectors.

Somehow I get the impression that we gardening enthusiasts are thought to be whiling away our time sitting around in the garden drinking an

awful lot of coffee as we watch our plants grow. Like everyone else, gardeners can only consume so much coffee before becoming hyper. Nearby neighbors would be the first to suspect we were growing something besides tomatoes and, chances are, they'd drop subtle suggestions to the local



Gardeners are happiest when digging, planning, and daydreaming about their spectacular successes.

sheriff like, "You'd better get over there before this thing gets out of hand!"

Well-intentioned givers apparently don't take time to notice what gardeners actually do besides dig. A good example of this concerns a friend of mine who spends much of his spare time re-landscaping his one-acre Garden of Eden. He never seems completely happy with his results and he is constantly moving something he has put in the wrong place, or he obliterates it entirely and plants something else. I believe he has had contact with every type of shrub and tree known to man. He is what I call a "re-arranger."

My friend actually wears out shovels that are meant to last a lifetime. Here's someone who could use solid forged digging tools, but what were

the gardening items found under his Christmas tree last year? A hand type seed sower from his two-year-old niece and a house plant tool set from his neighbor. The child could be forgiven as her mother probably influenced her choice. However, the mother assured him, "Uncle Bob, Chrissy picked this out for you all by herself." Uncle Bob was at a loss for words.

At least Bob doesn't have to worry about the neighbor being too observant, as dainty house plant tools were proof enough that the neighbor doesn't have the foggiest idea about what the re-arranger is doing. She just knows that Bob likes plants. (No need for growing a 20-foot high bamboo fence to guard against a nosy neighbor in this case!).

The practical gift was from Bob's son and was tied to a limb of the Christmas tree. It was a check for \$100 with a note cautioning Bob not to spend it all in one

place. The first two gifts ended up in a volunteer fire department's garage sale, but the check gave wintertime pleasure as the payee spent part of his days perusing catalogs picking out just the right digging tools and comparing prices and quality with tools at the local hardware store.

There are those of us who don't specialize in growing any particular thing. We're into everything from flower boxes to fruit trees to you-name-it. We're happiest when we're digging and planning and daydreaming about our spectacular successes. This lifestyle cries out for all sorts of nifty gifts—fancy flower pots and hanging baskets, pruning shears, moisture meters, slug traps, loppers, T-shirts with garden slogans, and on and on.

A plastic caddy is an inexpensive and very useful gift. Some folks use a caddy to carry household cleaners around as they tidy up. I use the same type caddy to carry trowels, clippers, etc. When the caddy gets dirty, I merely empty it and rinse it out. Good as new! Once I did receive another type of caddy—a cute thing—made of heavy fabric with pockets for gloves, trowels, etc. I call this type of carrier “made to sell.” It’s nice for a non-gardener.

I haul tools such as limb loppers, rakes and shovels in a two-wheel garden cart. The cart makes it possible to take large items with me instead of making several trips to the tool shed. My cart has bicycle type wheels and is a lot easier to handle than a heavy wheelbarrow. I wish I had a dollar for every load of compost, mulch, and clippings I have hauled in it. Now the tires need replacing. The right one has to be aired up frequently, although the tire has been wrapped several times with electrician’s tape. A hole is beginning to wear through the plywood bottom, but my ancient cart is still in use. I have been very diligent about parking the cart in plain view of any visitors who might be generously inclined where gifts are concerned. So far, no one seems to take the not-so-subtle hint.

I doubt that I’ll receive a new cart for my birthday or any other auspicious occasion. It’ll probably be mugs again and I’ll have to think of something appropriate to say. “How clever. Where did you find these?” ... “The Italians sure know how to use their primary colors, don’t they?” (Hope there’s no lead in the paint.) ... “What a big mug! This ought to hold a lot of coffee!” Thanks --- Oh, it’s for soup?” (I have a collection of those too.)

One of the best gifts from me to me has been a kneeler/seat. I not only use this in the garden when transplanting or weeding, but it’s a handy seat to use in the greenhouse. Bless the inventor of this useful item.

We green thumb people have a habit of making-do with odd containers cast off from the kitchen—battered sauce pans, kettles with tops missing, old coffee pots, etc. No one seems to think that a watering can makes a great gift, but it does. If it seems too Plain Jane, it can be made festive by tying a bright bow on the handle when presented as a gift. (The giver could go the extra mile and attach a container of soluble plant food, but I guess this would be like asking for a miracle.)

Watering cans come in all sizes. Some are for weight lifters and are made of heavy galvanized metal. When they are filled with water and toted here and there, plenty of muscle-building takes place. My favorite watering can has a long, straight spout and is made of heavy outdoor plastic. It won’t last as long as the galvanized cans, but I don’t risk back problems when I use it.

Another gift concerning water is a good quality, flexible water hose. Gardeners have lost their religion over stiff, kinked hoses. How many of us have started out to water plants only to discover there’s no water coming from the nozzle? We trace back through grass and around shrubs, and sure enough, there’s a kink!

Hoses should be practical lengths. A 25-foot hose may work fine in a postage-stamp size yard, but it’s far too short for most vegetable gardens. Trying to stretch an extra inch or two from a short hose can lead to slapstick comedy when it breaks loose somewhere and directs a stream of water toward the already half-mad gardener. He who denies ever having had his spirits dampened by a water hose has had his memory dimmed by too much coffee.

Most people should never select seeds or plants for a gardener unless so directed. This can lead to breakups in friendships. Most of us have distinct likes and dislikes and we usually know what will succeed for us and what will not. Maybe we already have plenty of dogwoods, roses, herb seeds or whatever and, boy are we tired of re-potting Norfolk Island pines.

There’s nothing like a well placed gift certificate—right in the palm of the green thumb person’s hand. This shows respect and allows freedom of choice. The certificate can be spent on anything the issuing company carries, and please let it be a diversified company with lots to offer. The recipient can enjoy a break while drinking coffee from a collector’s item and green thumbing through a wish book. Δ

A country moment



BHM publisher Dave Duffy, right, and Paul Boos wrestle a log onto a sawmill.

Forget the dog, the chicken is man's best friend

By Richard Blunt

The domestic chicken, or *Gallus domesticus* as the Romans called it, has lived with humans for centuries. It is probably the descendent of a wild asian bird, and historians have found references to its domestic descendant in the art and literature of India, China, and southeast Asia as early as 3000 BC. Egyptians were managing large flocks of chickens by the Second Dynasty (2890 to 2680 BC), but for some reason did not record much about their accomplishments in the breeding and keeping of chickens. Greek writings, however, describe how Egyptians designed and built clay incubators with the capacity to incubate and brood 10,000 to 15,000 chicks at a time. Incubators with greater capacity have only existed in this country and western Europe for about 80 years.

It was sometime before the sixth century BC that the Egyptians and the Persians introduced the wonders of domesticated chickens to the Greeks. The Persians shared their talent for breeding Malayan and Indian jungle fowl, which were used primarily for cock fighting, while the Egyptians taught the Greeks how to successfully develop and maintain breeds for the production of eggs and meat. For the next 200 years, chickens became an indispensable element in Greek life. At first they were used primarily in religious ceremonies, folk medicine, and the popular sport of cock fighting. But by the third century BC, breeding chickens for egg laying and meat production had become a priority in Greek civilization.

The Greeks passed their knowledge of the chicken on to the Romans. It was in Rome that the chicken truly reached its apotheosis. There, it became a sacred bird, often used as the central figure of various methods of divination, apothecary, and as a serious subject for philosophical inquiry. In Rome, fighting cocks were trained like gladiators. They were fed garlic before they fought in the belief that it would increase their courage and ferocity. The Romans also believed that garlic had the same effect on men. The writings of Roman naturalists and philosophers elevated the chicken to an exalted position in urban civilization. They skillfully molded it into a genuine object of scientific scrutiny and philosophical inquiry. No longer would the chicken be a taken-for-granted resident of the barnyard or cockpit.

The chicken has always meant much more to people than a cheap meal. The cock, or rooster as we now call it, has long been respected, especially for its ferocity as a fighter. In ancient Syria, Borneo, and Sumatra the fighting cock was worshiped as a god—an exalted status that usually saved it from becoming Sunday dinner. There was even a time in



Richard Blunt

ancient Greece when cock fighting was considered a national sport. The Romans viewed the cock as a noble gladiator, and the cock fight was a solemn ceremony that reinforced their belief that men should be brave—imitators of the cock.

Cockfighting came to its greatest secular popularity and refinement in late medieval England. The Church made vigorous efforts to repress it but only succeeded in driving it underground. As a compromise with the people, the Church did finally sanction organized cockfighting events on special days, such as Shrove Tuesday. One very popular Shrove Tuesday event was held in English grammar schools. The schoolmasters were paid a “cock fee” for allowing the children to bring their cocks to school, and all learning was suspended for the day as the desks and chairs were pushed aside to make room for the daylong contests. The student who owned the champion cock was excused from corporal punishment during Lent, along with one other student of his choice. At the end of the day the schoolmaster was presented with all of the cocks that were killed.

During the reign of Henry VIII, cock fighting flourished in England, exceeding even horse racing in popularity. James I, Charles II, And William the III were among other monarchs who were avid cockers. By the end of the 18th century, however, reformist doctrine started to take hold with the English majority. By 1835, cock fighting was reduced to the rank of a cruel and capricious sport and was, once again, driven underground.

In spite of being prohibited in England, after 1835 cockfighting found a new home in America. Ships that carried English settlers to America also carried chickens and fighting cocks. Cock fighting was frowned upon by the Puritans but it still flourished from New York to Georgia. Before and

after the Revolution, New York was the center of cockfighting in the East. Here the sport was dominated by freed slaves and Irish immigrants.

Before long, the sport spread west and became most popular in areas settled by Southerners and the Irish. As in England, reformers moved quickly to force legislation to outlaw cock fighting but it soon became obvious that there was little sentiment for this type legislation on the national level, so the individual states were left to pass their own laws. But even on the state level, very little anticocking legislation was passed until early in the 20th century. While visiting friends in Florida, in 1971, I was surprised to find that cockfighting was still legal in that state.

Outlawing cockfighting in this country has had the same effect as Prohibition. As you read these words somewhere in this country, loyal members of a tight fraternity of cockers is gathering around a pit, anxiously waiting to place their bets on the outcome of the main event.

Cultural influence

The chicken has influenced our languages and cultures. From ancient times to the present, if two people look or act the same, they are said to be “hatched from the same egg.” The ancient Greeks compared poor writing to “chicken scratches.” Using the word chicken to describe a coward has been popular since Shakespeare’s time and the proverb, “I would not have him count his chickens so soon before they hatched,” was found in a collection of proverbs published in 1579.

Superstitions surrounding chickens are also alive and well in both urban and rural areas. One superstition declares that there will be sickness in the house if a hen crows. Another claims that a farmer’s chickens will be like the first person who comes to his house on New Year’s morning—a stout and prosperous person meant plump chickens while a poor meager person meant scrawny chickens.

Make a wish

Two people tugging on the magic clavicle, or wish bone, until it breaks, dates back almost 2,500 years to the ancient Etruscans. Chickens were kept in Etruscan temples to answer questions by pecking at corn kernels in a circle marked with letters of the alphabet. When the bird was through eating, a priest would enter the circle and interpret the results. When one of these sacred birds died, its collar bone was dried and believers were allowed to stroke it and make a wish. When the custom was passed to the Romans, people started tugging on the bone until it broke. The wish of the person holding the half containing the “head” would be granted. I’ve heard it suggested that the phrase, “to get a lucky break,” came from this ancient custom.

Before trained physicians came on the world scene in 18th century, chickens provided a living drug store of remedies for everyone—rich and poor. In the practice of folk medicine, people were inclined to reach for a chicken to cure almost any malady of the body or the spirit. In ancient Greece, as well as other parts of the world, fever, arthritis, colic, dysentery, epilepsy, headache, constipation, and cough were all treated with various parts of the chicken. The remedies are endless and most are far too complicated and absurd to mention here. But some made sense and are still used today: a bowl of homemade chicken soup has always been, and probably always will be, prescribed as a comfort and cure for many maladies, real and imagined.

Mass production

The modern world, with its fast-paced industrial technology, has nearly turned the chicken into a man-made living machine, existing solely to lay eggs and be eaten.

The end of the chicken’s role as a sideline element of farm economy started to change near the end of the 19th century. Industrial technology was advancing at a rapid rate and the chicken, which was being increasingly marketed as a commodity, became the object of technological innovation. Today commercial poultry farms in the United States produce over six billion broiler chickens annually. The larger farms operate 10 or more chicken houses, each of which can hold more than 40,000 chicks. This fast paced production has made chicken inexpensive and easy to buy. As a result, the consumption of chicken in America has increased nearly 300 percent since 1900. Some complain that new hybridized chickens have little or no taste. I



have noticed that the leg and thigh meat is not as dark as it was just a few years ago and not as strong tasting. But in some ways this is a plus because the mild flavored flesh can be seasoned and prepared just like veal, with excellent results at a fraction of the cost.

In the recipe section of this column I have selected recipes that demonstrate that chicken is still a flavorful protein and does not need a lot of seasoning to taste good. When flavor enhancers are used, they are meant to complement the subtle flavor of the chicken, not mask it.

The first two recipes are old time standards which, when prepared properly, will show you that chicken has not lost all of its flavor. The last recipe will demonstrate how chick-

en can support flavor enhancing, without losing its own subtle taste.

Basic chicken broth

Fresh chicken broth is one of the foundation ingredients in my kitchen. Without it, many of my favorite foods would be impossible to prepare. Most of the soups, stews, and casseroles I prepare are made using fresh chicken broth as a basic ingredient. Its mild flavor and delicate aftertaste also make it a perfect enhancer for adding flavor and body to vegetable, pasta, and bean dishes.

I seldom let my supply of fresh chicken broth run out, but it does happen. There is nothing difficult about making fresh chicken broth. Broths are simply the end product of slowly simmering meat, fresh vegetables, and herbs in lightly salted water. It takes about three hours to properly prepare a good chicken broth. But once you get the broth started, it requires little attention.

I rarely go through the bother of buying whole chickens and butchering them at home. When my supply of fresh broth runs low, I simply process a whole bird to replenish it. I don't live in an area where dressed stewing hens are easy to find, so I use a five to six-pound roasting chicken, or capon instead. Both of these will produce five to six quarts of excellent chicken broth, and the leftover meat is used in a variety of recipes.

Once a month my mother would spend an entire Sunday afternoon making a two-gallon batch of fresh chicken broth to share with our elderly neighbors. She would then make something special for dinner using her fresh-made broth. I suggest we do the same, that is, set aside two quarts of this broth, when completed which we will use to prepare one of my mom's best Sunday chicken specials.

Cool the rest of the broth in the refrigerator overnight. The fat will congeal on the surface of the broth, making it easy to remove. You can then pack the clear, fat-free broth in suitable size containers and store them in the freezer for future use.

Ingredients:

1 5 to 6 pound stewing hen or roasting chicken
6 quarts cold water
2 medium onions, peeled and cut into quarters
1 celery rib with leaves attached
1 whole carrot
2 bay leaves
8 whole black peppercorns
3 whole cloves
1 piece peeled fresh ginger about one inch long, chopped
1 tsp. Kosher salt

Method:

1. Place the chicken and the water in a 10- or 12-quart stockpot. Place the pot on the stove over a low flame and let the water come to a gentle boil. A froth will appear on top. This will take from 45 minutes to one hour. Carefully skim off the froth as it rises to the surface. Do not, for any reason, stir the pot after the froth first begins to appear.

2. The froth will continue to form on top of the broth for about an hour. When it stops foaming, let the broth simmer for about 30 minutes, then add the onions, celery, and carrot.

3. Let the pot return to a simmer while carefully skimming off any more sediment that rises to the surface. Add the bay leaves, peppercorns, whole clove, ginger, and salt.

4. Reduce the heat to a point where the broth is barely simmering. Continue to simmer, uncovered, for 1½ hours. If you are using a roasting chicken or capon, remove it at this



point and let the stock simmer for another hour. If you are using an old stewing hen (fowl), leave it in the pot until the end.

5. Turn off the heat, remove the stewing hen, if necessary, and let the broth settle and cool.

6. Strain the broth into another pot through several layers of cheese cloth and place the pot in the refrigerator. This is the fastest and safest way to cool a perishable hot food like chicken broth. You can safely let the stock cool, unrefrigerated, for up to 90 minutes before placing it in the refrigerator. If you live in a northern climate, during the winter you can take a pot of hot stock on a cake rack and place it on your back porch for super-fast cooling.

Chicken and dumpling stew

On her recipe card my mom called this dish "North Carolina chicken and dumpling stew." Since I have never come across a southern recipe that even remotely resembles this dish, I have removed North Carolina from the title. Regardless of its origin, this recipe truly demonstrates how the subtle richness of a homemade chicken broth, combined with the moist tender flesh of a properly cooked chicken, can elevate a simple dish to an epicure's delight.

Raised Dumplings:

Dumplings hold a special place in almost every cuisine. Italian cooks make small dumplings, called gnocchi, with a variety of starches including common all purpose flour, potatoes, semolina flour, pumpkin, and cornmeal. They even make a dumpling using ricotta cheese. In Germany

they make serviettenknödel, a tiny light dumpling that usually accompanies pot roasts. In western Austria they make kasnocken, a dumpling made with dry bread and flavored with aged local cheeses. Dumplings are also a large part of Chinese cuisine. On restaurant menus they are usually listed as dim sum and are served in a wide variety of steamed, boiled, and fried versions. Some special Chinese restaurants open just for lunch serve only dumplings and tea.

The dumplings used in this recipe develop a light, fluffy, texture when cooked, but they hold together when mixed with the other ingredients in the stew. If you are new to homemade dumpling recipes, I suggest you make the dumpling dough before you start the stew. It will hold well in the refrigerator until it is time for you to use it. Do not hold the dough for more than an hour. If you do, the baking powder will dissipate and the gluten in the flour will over-develop. This will turn your dumplings into slippery, tough hunks of boiled dough. If you are a fresh-dumpling pro, pick your own time during the preparation to make your dumplings. The closer to when you are going to incorporate them, the better.

Dumpling Ingredients:

1 cup all purpose flour
1½ tsp. double acting baking powder
¼ tsp. baking soda
½ tsp. Kosher salt
2 Tbsp. unsalted butter
2 medium eggs, slightly beaten
⅛ cup buttermilk or low fat plain yogurt

Method:

1. Combine the flour, baking powder, baking soda, and salt in a bowl and stir until well blended.
2. Cut in the unsalted butter with a pastry blender until the flour resembles course corn meal.
3. Combine the slightly beaten eggs with the buttermilk or yogurt. Using a wooden spoon, quickly stir the egg mixture into the flour, using as few strokes as possible.
4. Lightly flour your work surface, and turn the dough onto it. Sprinkle a little flour on the dough to prevent it from sticking to your fingers.
5. Gently flatten the dough with the heel of your hand, sprinkling a little more flour if it sticks to your hands or the work surface. Fold the dough in half, and gently press it flat again. Repeat this gentle flattening and folding process until the dough is just smooth. Do not try to knead the dough as you would bread dough. Overworked dumpling dough becomes tough and will not rise properly.
6. Roll the dough on a well-floured board to a ¼-inch thickness. Cut into strips that are one-inch wide and two-inches long. Set dumplings aside until needed.

Stew Ingredients:

1 cooked, skinned, and boned 5 to 6 pound chicken. (cut the meat cut into ½-inch pieces)
8 cups fresh chicken broth
1 bay leaf (dried or fresh)
2 ribs celery, diced medium
½ tsp. dried sage leaves
½ tsp. dried thyme leaves
3 Tbsp. margarine or butter
1 large or 2 medium yellow onions, diced medium
1 pound fresh carrots, peeled and cut into medium size chunks
¼ cup cold chicken broth
4 Tbsp all purpose flour
Kosher salt to taste
fresh ground black pepper to taste
1 recipe of dumpling dough (see previous recipe)
1 cup frozen peas, thawed

Method:

1. Skin and bone the chicken, then dice the meat. Hold the diced chicken in the refrigerator until you are ready to use it.
2. Put the eight cups of fresh broth in a Dutch oven—or other heavy-bottom pot large enough to comfortably hold all of the ingredients—along with the bay leaf, celery, sage, and thyme. Place the pot on a medium flame, bring it to a boil and simmer until the broth is reduced to about 6 cups. This will take about 20 minutes.
3. While the broth is reducing, melt the margarine in a cast iron skillet, or other heavy-bottom skillet. Sauté the onions until they turn a medium brown. Stir the onions frequently to prevent them from burning. If the oil in the pan evaporates before the onions are done, add a tablespoon of the simmering broth to the pan.
4. Deglaze the skillet by adding a cup of simmering broth to the browned onions. Simmer the onions until the pan is completely deglazed and the broth has turned a light brown color. What we have done here is create a flavor enhancer by subjecting the onions to a controlled high heat. Food scientists call this a Maillard reaction or browning reaction. The process creates a rich flavor and color similar to the crust of fresh baked bread, coffee beans, and the roasted malt used in dark beers and ales.
5. Add flavored onion mixture and the fresh carrots to the broth.
6. When the broth returns to a simmer, combine the cold chicken broth with the flour and mix until there are no lumps. Slowly stir this paste into the simmering broth. Continue stirring until the mixture shows signs of thickening, which will only be slight. Continue simmering until the

carrots are tender. This is a good time to make your dumplings if you didn't before you started the stew.

7. Add your dumplings to the simmering broth mixture. Simmer the dumplings until they are raised, and cooked through.

8. Gently stir in the chicken meat, thawed peas, salt, and pepper. Simmer the stew until the chicken and peas are heated through. Serve immediately.

Chicken, vegetable, and pasta medley

This is my newest chicken recipe. It has been a regular item in my house for the past three months. The recipe blends mild tasting chicken breast meat with the more flavorful thigh meat and I enhance this mixture by marinating it in a light Oriental style marinade. I use a preparation and assembly method that resembles stir frying. I like it because it helps maintain integrity of the different textures and flavors present in the dish, particularly the flavor and texture of the light and dark chicken meat. One of the real benefits of industrialized chicken, though many will disagree, is its extremely mild tasting flesh that will readily take on the flavor of other ingredients without losing its own. Chinese chefs are masters at infusing chicken meat with the natural flavor of various ingredients, then cooking the chicken quickly to prevent the introduced flavors from masking that of the chicken. Many contemporary Italian chefs have mastered this concept also. They have developed chicken and pasta recipes that are easy to prepare, low in fat, and taste as if they required a major effort in the kitchen. This recipe is my own contribution to this great concept.



The preparation for this dish resembles that of many Chinese stir recipes. All of the ingredients are prepared ahead of time and set aside in the order that they will be incorporated into the recipe. I suggest you have a suitable size pot of boiling salted water for the pasta on the stove before you start cooking. Timing the cooking of the pasta with the completion of the sauce is not difficult, but it is absolutely essential. Immediately after the cooked pasta is drained, it must be blended with the other ingredients. This is the only way to maintain the taste, texture, nutritional integrity, and visual presentation of the dish. The biggest mistake that folks make with this type of recipe is to cook the pasta then place it under cold running water to stop the cooking process. When you do this, you wash away the surface starch and this lowers the nutritional value of the pasta. You also reduce the ability of the cooked pasta to absorb the flavor of the sauce. It also creates an uncomplimentary tex-

ture in the finished dish that no amount of culinary wizardry will totally eradicate.

Special Equipment:

- 1 14-inch cast iron skillet, 15-inch wok, or other large heavy bottom skillet.
- 1 12- or 16-quart pot with a cover

Ingredients:

- 12 oz. boneless, skinless chicken breast
- 12 oz. boneless, skinless chicken thighs

Marinade:

- 2 tsp. light soy sauce
- 2 tsp. dry sherry, rice wine, or other dry white wine
- 1 tsp. sesame oil
- 1 tsp. five spice powder
- ¼ tsp. fresh ground black pepper
- ½ tsp. granulated sugar

Vegetables:

- 1 medium yellow onion, diced medium
- 1 medium red bell pepper cut into ½-inch wide by 2-inch long strips
- 1 medium yellow bell pepper cut into ½-inch wide by 2-inch long strips
- 4 oz. fresh mushrooms, sliced ¼-inch thick
- 2 cloves fresh garlic, minced
- 2 cups fresh chicken broth
- ¼ cup fresh chicken broth
- 3 Tbsp. all purpose flour
- 1 cup diced canned tomatoes
- 6 oz. frozen sugar snap peas, thawed
- ½ tsp. dried chilli pepper flakes (optional)
- 8 quarts cold water
- 1 Tbsp. Kosher salt
- 2 Tbsp. any light oil (to saute the chicken)
- 1 Tbsp. any light oil (to saute the vegetables)
- Kosher salt to taste
- fresh ground black pepper to taste
- 1 pound dried penne or other tubular pasta

Preparation:

(About 20 minutes)

1. Cut the chicken into strips ½-inch wide by approximately 2 inches long. Uniform length is not critical.
2. Combine all of the marinade ingredients in a bowl that is large enough to hold the chicken comfortably. Add the

chicken strips and rub with the marinade, using your hands. Marinate the chicken in the refrigerator for one hour.

3. While the chicken is marinating, prepare the onion, red and yellow bell peppers, mushrooms, and garlic. Place each vegetable in a separate bowl (that's four bowls) after being prepared and set it aside.

4. Measure the two cups of chicken broth and set aside.

5. Combine the remaining ¼-cup of chicken broth with the flour and set aside.

6. Combine the diced tomatoes with the thawed sugar snap peas and set aside.

7. Measure the eight quarts of cold water into a suitable size pot, cover the pot and place over a medium heat. When the water comes to a boil add the salt and replace the lid.

Assembly:

1. In the skillet, heat the 2 Tbsp. of oil over a medium high heat. Add the chicken strips, and cook until the chicken is lightly browned. Reduce the heat to medium, quickly remove the chicken from the pan and set it aside.

2. Remove the browned chicken bits from the bottom of the pan by adding the 2 cups of chicken broth and scraping the bottom with a wooden spoon as the mixture comes to a simmer.

3. While stirring constantly, add the ¼ cup of chicken broth, mixed with the 3 Tbsp. of flour to the simmering chicken broth. Cook the mixture for five minutes, adjusting

the taste with the Kosher salt and fresh ground black pepper. This will create a rich light brown sauce, similar to the one in the previous recipe. Remove the sauce from the pan, rinse and dry the pan, then return it to the stove over a medium heat.

3. Heat the remaining one tablespoon of oil. Sauté the onions until they just begin to brown. Add the minced garlic to the onions and cook for one minute. Now add the bell pepper strips and the mushrooms, and continue cooking until the peppers are tender, but still firm.

4. Reduce the heat to low, and gently stir in the tomatoes, sugar snap peas, and chicken. Cook the mixture for another minute or until the chicken is heated to serving temperature. Turn off the heat, but do not cover the pan.

5. Remove the lid from the pasta pot, adjust the heat to high to bring the water to an active boil. While stirring constantly, to prevent sticking, add the dried pasta to the rapidly boiling water. Cook the pasta until it is just tender, and drain.

6. While the pasta is still hot, return it to the pot. Gently stir in the chicken mixture. Serve immediately with plenty of fresh grated Italian hard cheese.

The next time you go to the market for chicken, remember that you are buying more than an inexpensive and delicious meal. You are buying an important piece of history. Δ

A country moment



Paul Boos, of Montague, CA, operates a sawmill, while his wife, Margaret, shields her ears.

Breastfeeding — a primer

By Kathy Parkes

When access to clean water or electricity is limited, one of the most important and essential skills to keep babies healthy is breastfeeding. Breast milk is safe, clean, and always at the correct temperature. Breastfeeding a healthy, full-term infant requires no supplemental bottles, pacifiers, breast pumps, or gadgets of any kind. In fact no other food is necessary until approximately the middle of the first year of life. Although breastfeeding an infant should be natural and easy, mothering through breastfeeding has become a lost art and those that succeed in our negative social climate are truly pioneers.

The benefits of breastfeeding have been well-documented and it is politically correct in the medical establishment to push breastfeeding. (Breastfed babies have fewer and less severe ear infections, less chance of childhood cancer, diabetes, allergies, heart disease in later life, and in mothers breastfeeding helps protect against postpartum hemorrhage and breast cancer among other things.)

Unfortunately hospital practices that negatively affect breastfeeding are often the cultural norm. Our society pays only lip service to breastfeeding and then makes women feel guilty if their efforts are not successful. For example, while the baby is learning to breastfeed in the early weeks it is important not to confuse the baby by giving him bottles or pacifiers and yet this is often done in the hospital. A confused baby may latch on and then break off, turn his head from side to side, and cry in frustration. After several hours a mother may be exhausted from trying to get her baby to nurse, feel rejected by him and out of desperation give the baby a bottle. Over

several days her milk supply may diminish if the baby is not nursing effectively and more bottles need to be given. It is a downward spiral, one



that usually ends with the baby weaned and the mother feeling like a failure because she was told that nursing was “easy” and “natural.”

One way to increase your chances for success is to become informed. Read as many books on breastfeeding as you can and attend La Leche League meetings. La Leche League is a non-profit, non-sectarian organization dedicated to “empowering women to breastfeed their babies.” You can watch happy babies nursing and network with other mothers at League meetings. The women in the group help take the place of grandmothers, aunts, sisters, and our own mothers who may no longer be nearby or who may have bottle-fed their own children.

Throw away the clock

Bottle feeding is so different from breastfeeding that sometimes well-intentioned advice is actually harmful to the breastfeeding relationship. An example of this is feeding on a four-hour schedule as was popularly taught to mothers in the sixties and seventies. When a baby cries before four hours is up, a mother may be told that her baby is “spoiled” and that he should be “taught” to wait, but the baby may really be hungry because breastmilk is digested much faster than formula. Feeding only every four hours may also cause a decrease in the mother’s milk supply as breastfeeding works on a supply and demand basis—the more a baby nurses, the more milk a mother makes. Most successful breastfeeding mothers find it helpful to “throw away the clock” and nurse their babies whenever they seem hungry. It is also a relief to hear from an experienced mother that a baby is not capable of mental manipulation.

Here are a few tips to set you and your baby on the road to feeling self-reliant:

- Nurse early and often. Listen to babies’ cues and nurse on demand.
- Try to avoid artificial nipples, bottles, pacifiers, or nipple shields in the first six weeks. Both of you are learning and babies get confused easily.
- Pay close attention to proper positioning. This is where watching babies nurse can be extremely valuable. It has been found that improper positioning is the major cause of sore nipples, so positioning of the baby at the breast is crucial!
- Arrange for help with meals, housework, or other children in the early weeks. You are doing extremely important work bonding with and breastfeeding your new baby and it can be physically and emotionally demanding.

- Read everything you can get your hands on and develop a network of support. Attend La Leche League meetings while you are pregnant, if possible. Be aware that a lot of so-called breastfeeding advice is put out by formula manufacturers who do not necessarily want you to succeed. (Along the same vein, if you are going to use a breast pump avoid one made by a formula manufacturer.)
- Throw away the clock. Contrary to popular belief, limiting feedings to five or ten minutes per side will not prevent sore nipples. Nurse on one side until baby shows signs of slowing down, then switch and nurse as long as baby wants. This, along with nursing as often as baby needs to, will help ensure a good milk supply and a full baby. One

way to tell if baby is getting enough is by counting wet diapers - 6-8 wet cloth diapers a day (5-6 disposables), and 2-5 bowel movements in a 24 hour period (after the meconium is passed in the first couple of days.)

Breastfeeding your baby is an important skill that enables your family to be more self-reliant. There is no need to rely on clean water or power sources or gadgets of any kind, and breastmilk is free. To succeed with breastfeeding a woman may have to arm herself with information so she can weed out the poor or contrary advice and have a back-up support system for times when she may need it. Breastfeeding is an important step towards taking the responsibility for the health of your family away from the so-called "experts" and placing it back where it belongs—with you.

Sources of Information:

"The Womanly Art of Breastfeeding" - La Leche League International. This book has all the basics of breastfeeding and also serves as a survivor's manual for the baby's first year.

"Breastfeeding Pure & Simple" - Gwen Totsch. Getting breastfeeding off to a good start - covers the early weeks.

"Bestfeeding: Getting Breastfeeding Right for You" - Mary Renfew, Chloe Fisher and Suzanne Arms - the basics of breastfeeding - positioning and latch-on emphasized.

La Leche League International - P. O. Box 1209, Franklin Park, IL, 60131-8209 USA. Call 1-800-LA LECHE for information on groups or leaders nearest you.

"The Fussy Baby" - William Sears - breastfeeding friendly tips on soothing fussy babies. Δ

A country moment



Hummingbird (Frank Tickle Photo)

THE IRREVERENT JOKE PAGE

(Believing it is important for people to be able to laugh at themselves, this is a new feature in *Backwoods Home Magazine*. We invite readers to submit any jokes you'd like to share to *BHM* P.O. Box 40, Montague, CA 96064. There is no payment for jokes used.)

If a man speaks in the forest, and there are no women present to hear him,...is he STILL wrong???

(Submitted by Walter Hughes, Seattle WA)

An 85-year-old widow went on a blind date with a 90-year-old man. When she returned to her daughter's house later that night, she seemed upset. "What happened, Mother?" the daughter asked.

"I had to slap his face three times!"

"You mean he got fresh?"

"No," she answered. "I thought he was dead!"

What's black and tan and looks good on a lawyer? A Doberman

Why are men like blenders? You need one, but you're not quite sure why.

How to make a blonde's eyes light up? Shine a light in her ear.

This Jewish man and a Polish woman are in love and want to get married. She tells her mom about her plans, but her mom forbids the marriage because he is not Polish.

The man remembers hearing about an operation that can make you Polish, so he goes to the doctor and asks about this operation. The doctor warns him about how drastic this operation is and how he will have to remove half of his brain. The man says "I don't care! Whatever has to be done!" So the doctor proceeds with the operation. As the man wakes up in the recovery room, he sees the doctor standing in front of him with a worried look. The doctor says "We made a slight mistake and accidentally removed 3/4 of your brain." The man yells out "Mama mia!!!"

What's black and crisp and hangs from the ceiling?....an Irish electrician.

How is a man like the weather? Nothing can be done to change either one of them.

Letter from Tennessee Mom to Tennessee Son
(Submitted by Judy & Ken Darko, Kingsport, TN)

Dear son:

I'm writing this slow cause I know you can't read fast. We don't live where we did when you left. Your dad read in the paper where most accidents happened within twenty miles of home, so we moved. I won't be able to send you the address as the last Kentucky family that lived here took the numbers with them for their next house so they wouldn't have to change their address.

This place has a washing machine. The first day I put four shirts in it, pulled the chain and haven't seen em since. It only rained twice this week, three days the first time and four days the second time.

The coat you wanted me to send you, your aunt Hazel said it would be a little too heavy to send in the mail with them heavy buttons, so we cut them off and put them in the pockets.

We got a bill from the funeral home, said if we didn't make the last payment on Grandma's funeral bill, up she comes.

About your father...he has a lovely new job. He has over 500 men under him. He is cutting grass at the cemetery.

About your sister...she had a baby this morning. I haven't found out whether it is a boy or a girl, so I don't know if you are an aunt or an uncle.

Your uncle Jessee fell in the whiskey vat. Some men tried to pull him out, but he fought them off valiantly so he drowned. We cremated him, he burned for three days.

Three of your friends went off the bridge in a pickup. One was driving, the other two were in the back. The driver got out, he rolled down the window and swam to safety. The other two drowned. They couldn't get the tailgate down.

Not much more news this time, nothing much has happened. Write more often.

Love mom.

DO RE MI Drinking Song (by Homer J. Simpson)

DO.....the stuff--that buys me beer....

RAY.....the guy that sells me beer.....

ME.....the guy--who drinks the beer....

FA.....a long way to get beer.....

SO.....I'll have another beer....

LA.....I'll have another beer....

TI.....no thanks, I'm drinking beer.....

That will bring us back to...

Where I live

By Annie Duffy

Crabbing, clamming, and smelting on the coast

Since I used to live on the southern California coast, I was expecting warm, sunny days. What I got on a recent trip to the northern California coast was fog, wind, and rain. But that didn't stop me from having fun.



We traveled by boat about two miles into the bay from the Samoa Launch Ramp, then beached on a remote portion of the mud flat.

My dad, my two little brothers, Jake and Robby, and I had loaded our boat with crab traps, salt water rods, and shovels, and we drove several hours to meet our neighbors, Rich and Yvette Perrigo, and their friends, Jerry and Marlene Henscher, for some clamming and crabbing. We met them at the Samoa Launch Ramp, a small park on Humbolt Bay across from Eureka.

Crabbing in the bay

As soon as we got there we put our boat in the water and went crabbing with Rich and Jerry. Since Dad and I were both novices, Rich showed us how to rig our crab traps properly.

Dad and I had been catching perch for about a week prior to our trip to use as bait for the crab traps, and Rich showed us how to thread the perch onto wire hooks that were attached to the traps.

We threw about 6 traps in, at different spots, about 25 yards from the beach. About 10 minutes later we went back to the first trap and pulled it up. I was amazed. I was expecting just a couple of crabs, but there were about 20. Most were red crabs, but a few were Dungeness, a slightly larger crab that is more purple than red.

We continued making our rounds with the traps for about an hour, cutting the time between checking each trap to about five minutes. Any longer and the crabs would eat all the bait and take off.

When we got back to camp, we feasted, cooking the crabs in a large pot Rich had brought. We all loved it.



Me digging for clams in Humbolt Bay at a negative .6 tide. The black mud was easy to get stuck in.

Marlene showed us how to break the shell with a nut-cracker and get at the meat. I was constantly cracking shells for the boys, and trying to feed myself at the same time.

After we ate, Jake helped me set up our tent. I decided to sleep in the boat since I didn't want to sleep in a tent with little boys. We have the kind of



From left, Robby, Jerry Henscher, me, and Jake hold clams and two Dungeness crabs. We dug three types of clams—steamers, horseneck, and Washington. The limit for assorted clams was 20 per person.

seats in our boat that fold into a bed, and it has a canvas canopy that can completely enclose the boat. I slept there both nights. It was fairly warm and it kept out the wind and rain.

Clamming in the mud

The next morning we got up at 7 to do some clamming. We followed Rich's boat a couple of miles into the



Yvette Perrigo and Robby hold clams. Robby helped by rinsing the clam meat in a bucket of water.

bay with our boat, then beached at a remote portion of the mud flat.

Even though the clams are usually two or more feet under the surface of the mud, they have what looks like an air hole in the sand. The holes are big enough to stick a pencil into. To test if a clam is really living there, you have to stick your finger into the hole. If water squirts out, then a clam is down there. Rich told us not to dig a hole unless several of these "air holes" were close together. It's kind of a waste of time to dig for every single hole you find, because it takes 10 minutes just to dig the hole to the depth of the clams.

We dug only a few holes, but they were goldmines. Rich showed us the difference between the clams we found. Horsenecks have a large shell with a long wrinkled foot. Washingtons also have a large shell,

but theirs is slightly darker than the horsenecks and their foot is smooth and light pink. Steamer clams are about half the size of the other two, and have a small ridged shell.

The limit for clams was 50 clams per day, per person. You can have up to 25 horseneck clams and 25 of anything else in combination.

By the time we left, the water was level with the mud flats, and the boats were 10 feet farther from the mud than they had been when we first got there. All of us were covered with mud. I had mud up and down both of my legs, and my face and hair were caked with it. My brothers looked worse than me.

When we got back to camp, Yvette showed us how to clean the clams. First, you poke them with a knife so they open up a little, then scrape the body away from the shell. Then you cut out the fat and the guts, and slice open the foot so you can get rid of any sand in it. Jake and Robby helped me peel the skin off of the horsenecks. Since the skin of the Washingtons is so smooth, we left it on. We left the steamers whole and steamed them for lunch. For something that looks so grotesque, they tasted awfully good—especially dipped in melted



The clams were easy to clean. Here, Yvette Perrigo and I clean Washington clams.

butter. Rich said the clams were brain food.

After lunch, Dad and I took the boys out to the middle of the bay and went fishing. Some people were catching halibut, but all we caught were a few crabs. They would cling to our bait when we pulled up our lines.

That night we celebrated Rich's 59th birthday. Yvette only put six can-



Rich Perrigo stands ready for the next wave of smelt with his six-foot wide homemade smelt net. The commercial nets are eight feet wide.



Jake and Robby help Rich Perrigo unload smelt into a five-gallon bucket. We only smelted for an hour, but brought back close to 30 gallons of fish.

dles on the cake—one for each decade (almost). Yvette had brought some “Happy Birthday” confetti, and by the end of the night it was everywhere.

Smelting in Orick

The next morning we packed up our stuff, said so long to Jerry and Marlene, then headed north for a couple of hours, to Orick.

We rented a motel and took showers, then went back to the beach to find Rich and Yvette.

Smelt are small, silvery fish that come up onto the beach to spawn.



Dad enjoys a beer and shows off a cleaned clam.

When the smelt are running, they come in by the millions.

Smelt nets are large “A” shaped nets (like the one above). Most commercial nets are eight feet wide, but Rich’s homemade net was only six feet wide.

Dad also had a net, but it was a sorry excuse for one. It was the kind of net you use to help bring really large fish into a boat. It was only about a foot and a half in diameter.

We waited around until word came that the smelt were running, then we hurried to the beach with the nets and buckets.

At some times, Rich was in water up to his knees catching the smelt. As soon as his net was full, he would come back to where the boys and I were and dump the smelt on the sand so the boys could put them in the buckets. Dad’s net caught a total of eight fish, but Rich let him use his smelt net and he caught a bunch.

We brought several buckets of fish back to Yvette, then we brought more buckets with us when we returned to the beach. Altogether, we brought about 30 gallons of fish back to Yvette, until she told us that she would go insane if we brought any more back. Dad and Rich were soaked

clear up to their chests before they were finished.

We washed them all and put them in plastic zip-locks so we could freeze them. Yvette made us take most of them home with us, since both the freezer and the refrigerator in their camper were full.

The next morning we said goodbye to Rich and Yvette and headed back home. We wanted to keep the fish from spoiling, so as soon as we got home we started beheading and gutting them, then we re-sealed them in plastic bags and froze them. We ended up with about 30 zip-lock-baggies of fish, and we still have about 10 bags left.

John Silveira, *BHM*’s senior editor, is the cook around the office, and he’s been frying the smelt with various



The beach where we went smelting is just south of Orick, CA. When the smelt run they come in by the millions.

recipes. Some of the recipes he got from *BHM*’s food editor, Richard Blunt.

We all eat the smelt differently. John eats them whole, bones and all, because the bones are so soft, but Dad likes to pull the backbone out. I’m not picky—I’ll eat them either way. In fact, I think smelt is on the menu tonight. Δ

Five building tricks for super-strong framing

By Don Fallick

I was standing on the edge of the roof overhang, holding two bundles of asphalt shingles, when my boss's son drove up. He looked at me, then took a long look at the empty space under the unsupported roof extension. I noticed his discomfort, so

lem. Applying one or more of the following five principles can add considerably to the strength and rigidity of frame construction.

Trusses

Wood is not a homogeneous material. It is much stronger in one direction

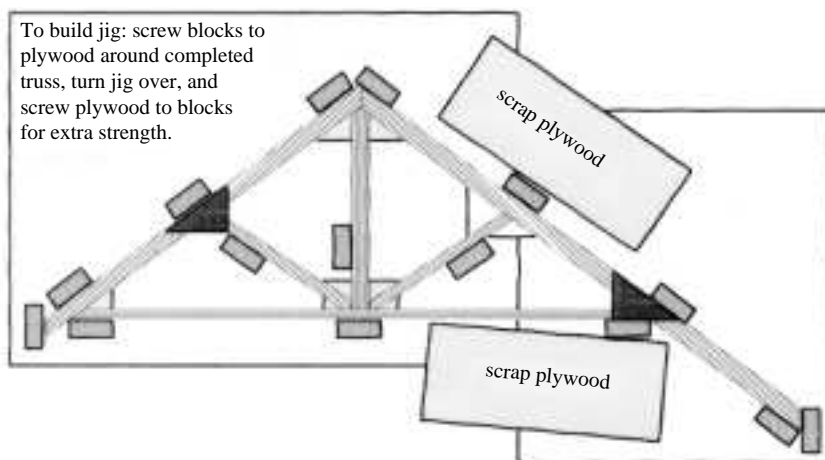
must be made of two-by-sixes, two-by-eights, or even bigger stock. Such lumber is expensive. Long ago, engineers learned they could add greatly to the strength of a roof by inserting compression members within the frames.

Such trusses are not hard to make. The only difficult part is cutting precise angles on the ends of the members so they will fit together tightly. A miter saw or motorized "chop saw" will come in real handy here.

The rule of thumb for designing a truss is to keep the area contained within each of the triangles equal. For all but the very largest buildings, use two-by-sixes for the rafters and center post, and two-by-fours for the cross-tie and the other compression members. Fasten them with plywood gussets, glued and screwed on.

Do not use sheet metal mending plates, even though they look like the kind of plates that hold commercial trusses together. They will not hold. Commercial truss plates are pressed into place with a 30,000 psi press. They cannot be hammered into place. The ones you buy in the hardware store are weak enough to be hammered in, and they won't hold against the compressive strain on a roof.

Gussets work well and can be easily cut from ordinary exterior grade plywood. Make gussets big enough to



Cantilever truss in a jig made from two sheets of plywood and scrap blocks. Some plywood gussets are not shown, to reveal joint details. Cut and set all truss members. Shim tight, then glue and screw gussets from top side. Pull shims and remove truss from jig. Turn truss over on a flat surface, and glue and screw gussets on the other side.

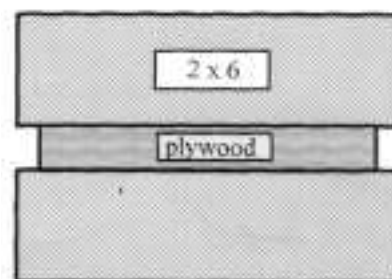
I sort of bounced up and down, right on the corner, four feet out from the nearest support. The roof didn't flex.

"Want to build a shed for me?" he asked.

Not every building needs to be built like the Rock of Gibraltar, but there are times and places when rigidity really counts. That shed I built needed a built-in roof overhang to cover an occasional woodpile overflow. Permanent roof supports would get in the way when the woodpile wasn't there, and it would look tacky. I built the shed right in front of my boss's house and I wanted it to look nice. The rigid roof cost only a few dollars more than traditional construction, and it solved an otherwise difficult prob-

lem. Wood's greatest strength is in resisting compression along its length. Wood is also quite good at resisting pulling tension, but it is weakest at resisting bending (flexion) and twisting (torsion). One way to make a wooden building as strong and rigid as possible is to arrange the wood so it is being used in its strongest dimensions.

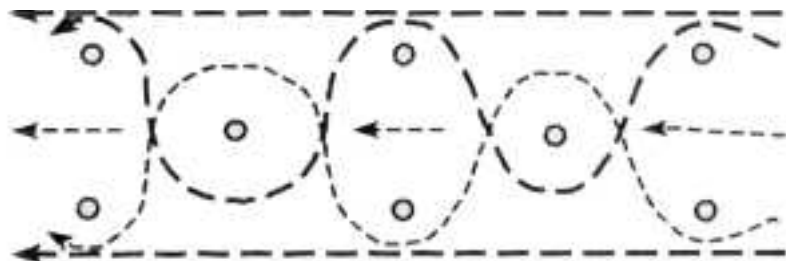
Here's an example. A typical peaked roof frame consists of two rafters with a cross-tie to keep the tops of the walls from spreading. The cross-tie exerts its strength in tension, so it can be made of smaller size lumber, such as a two-by-four. But the rafters must resist bending (flexion), where they are relatively weaker. So the rafters



Laminated header

cover at least eight inches of each frame member at each joint. Glue them in place with Liquid Nails® or some other construction adhesive, and fasten in place with 3d or 4d box nails, two inches apart, in wiggly lines down both edges of each truss member.

Nail the opposing gusset in an opposite pattern, to keep nails from opposite sides separated. Box nails are thin enough to keep from splitting the wood. If you must use common nails, set them three inches apart, and enlarge the gusset to accept the same number of nails. Do not use drywall screws. They have no give, and they will snap if the glue does not hold.



Laminated beam gluing pattern

Allow the glue to dry overnight before mounting the truss. Make one truss, then make a jig out of plywood so all your trusses will be identical. The jig can be made of plywood that you plan to use for roof sheathing, so it will actually cost nothing.

I-beams

Sometimes you need to make a flat, level surface, such as a floor, very stiff and strong. One way is to make "I-beams." They got this name because the cross section of a steel I-beam looks like a printed capital I. The vertical part of the beam resists bending vertically, but can bend and buckle horizontally, ruining its strength. The top and bottom flanges resist buckling, allowing the beam to exert its full strength.

I-beams do not have to be made of steel. Commercial wooden beams are made of plywood, with top and bot-

tom caps of milled lumber. You can make your own if you have a table saw and a rabbet cutting blade, but there is a way to achieve the same effect with low technology. The strength of an I-beam is proportional to the height of the vertical member, but also to the width of the flanges. By gluing and screwing plywood subflooring across the top and bottom of ordinary floor joists, you transform each joist into an I-beam with very wide flanges. Plywood subflooring does cost a bit more than regular subflooring, and is not as stiff, but it is much stronger.

If you need stiffness more than strength, you can save a lot of time

wet, use exterior grade chip board. It does cost more, but it won't dissolve.

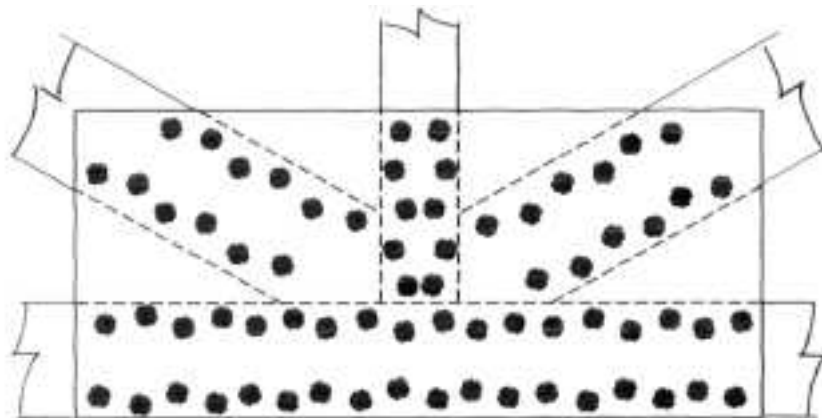
Laminated beams

One way to add strength to a framed wall is to make up laminated beams and headers. On load-bearing walls, headers are required over all window and door openings. Non-load-bearing walls generally require no headers, but just a top plate connecting the wall sections on opposite sides of the opening.

In a wall framed of two-by-fours, a typical 32-inch wide rough opening for a door or window requires a header made from a couple of two-by-sixes, with a piece of 1/2-inch plywood sandwiched in between. The plywood provides the strength and stiffness, while the two-by-sixes keep the plywood from bending.

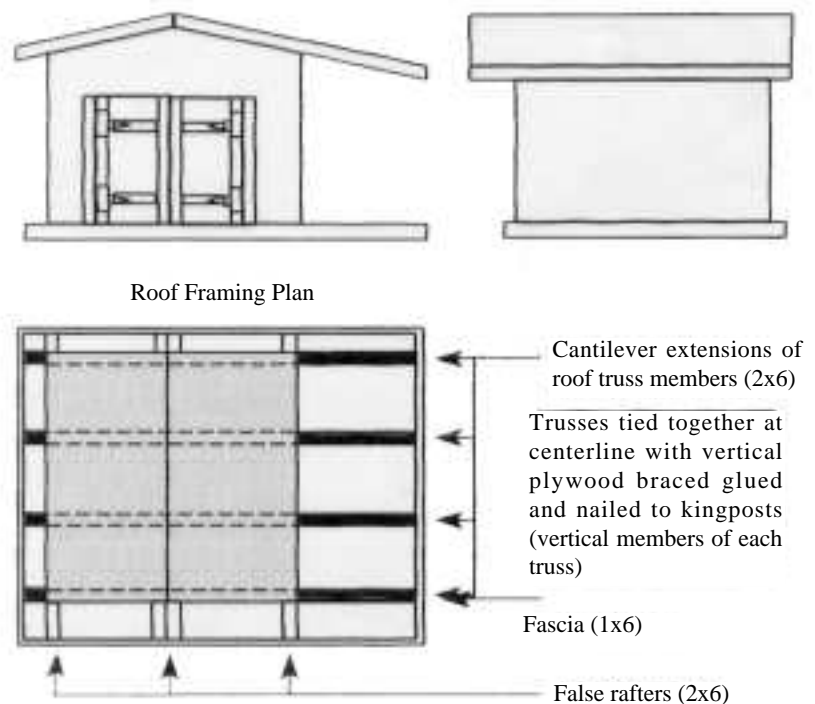
Laminate the beam by gluing the parts together with construction adhesive, then screwing together with deck screws six inches apart in a diamond pattern, from both sides of the beam. This laminated header is not only much stronger than one composed of just two-by-sixes, but it also is the right thickness to match the rest of the wall.

Larger windows may require headers made of two-by eights or two-by-tens. But what if you want to install a beam in place of a load-bearing wall?



Nailing pattern for a plywood gusset. Use 3d or 4d box nails two inches apart. Alternate pattern on other side of truss to keep nails separate.

So-called “glue-lam” beams are sold commercially by the linear foot, and they’re not cheap. But a plywood laminated beam just isn’t strong enough. One solution is to sandwich a piece of steel (not aluminum) flashing in the center of your plywood laminated beam. The steel is incredibly strong as long as the lumber keeps it from buckling. Where even greater strength is required use two sheets of steel, one on either side of the central plywood lamination. Lay beads of construction adhesive an inch from each edge of each beam member, then zig-zag in the center. Glue all the parts of the beam at the same time and bolt them together in a diamond pattern, one foot apart. Bolts cost more, but screws can pull out, and even a little buckling destroys all the advantage of the sheet metal laminations.



Three-view drawing of shed

Panelized construction

A common factor in all these strategies is construction adhesive. Don’t leave it out. Its purpose is to bind all the parts of a wall, roof, or floor into one solid piece. Modern cars all use this principle of unitized construction, instead of the heavy frames of olden days. Yet the cars of today are actually stronger, even though much more lightly built. Where car bodies are spot welded together, house framing can be glued together, producing a lighter yet stronger roof or wall panel. Floors and stairs built this way will never squeak. The trick is to create unitized panels that form complete walls, roofs, floors, and so on.

In Canada and some northern states, homes are built of panels of foam insulation with chipboard cladding. The cladding extends a bit beyond the foam, forming flanges for nailing or screwing two-by-sixes or two-by-eights along all four edges. This dimension lumber aids greatly in attaching the panels, but most of their strength comes from the cladding. The foam core keeps it from buckling. You can make your framed walls just as

strong by sheathing them inside and out. Glue and screw chipboard to the inside edges of all the studs and plates, and you nearly double the strength of the wall.

You can install the wiring and plumbing before you sheathe the interior, an advantage over clad foam panels. Just make sure the inspectors get a good look before you insulate and close up the walls.

Cantilevers

If your roof is strong enough it can extend beyond the support walls without external bracing. A cantilever is any structure, such as a roof or floor overhang, that is braced internally. If you are building trusses, it is easy to make part of the roof into a cantilevered extension. Just make one of the rafter members extend beyond the cross-tie. With the whole roof glued and screwed into one unitized panel, the cantilevered extension becomes extremely strong. It actually turns the whole roof into a lever, with the fulcrum at the support wall. Any con-

ceivable load at the edge is more than balanced by the weight of the entire roof on the other end of the lever. It is only necessary to adequately stiffen the roof edge.

This is easily done with one-by-four trim or two-by-whatever false rafters. Leave enough sheathing extending beyond the rafter ends to cover the edge trim. Apply glue to the trim, nail it to the real rafter ends, then screw the sheathing to it. Glue and screw false ridge beams and false purlins—horizontal stiffeners—under the gable ends of the roof. They add a little bit of stiffness to the roof, but their real job is to give you some place to nail the false rafters or gable end trim.

So how did I make that shed’s roof so strong? I used cantilevered trusses of two-by-fours, two feet on center. I glued and screwed the plywood roof sheathing to the trusses. Finally, I supported the edges of the plywood with trim, glued and screwed on, to prevent the plywood from flexing. I could have used bottom sheathing, but it wasn’t necessary. Δ

If you could have just one gun in the woods, go for a shotgun

By Rev. J. D. Hooker

Suppose, for whatever reason, you could only own one gun. But with just this single firearm, you would need to reliably bring in small game, such as squirrels, waterfowl, and upland game birds, while also taking large game from whitetail deer on up to moose, elk, and maybe even grizzly bear—out to 200 yards. Plus you'd use it to eliminate barn rats and other pests. And this same firearm would have to be an utterly dependable defensive gun if the need ever arose. Could you come up with an acceptable selection?

For more than just a few folks who are actually out here living a rural lifestyle, the decision to purchase a firearm often does require just this sort of deliberation. Most of us don't really see firearms as "collectibles," or worthwhile value-holding investments. We view them more as somewhat expensive, but necessary, working tools, looking at guns in much the same manner as we'd examine a used tractor or other pieces of equipment. At the same time, even a rather smallish collection of firearms, say a .22 rimfire rifle for potting small game, a lower grade double barrel shotgun for game birds, a centerfire rifle for large game, along with a revolver or auto-loading pistol for self defense, can be a tremendous budget buster for almost anyone.

Yet, many of us need them. Should the truth be told, I really can look back on quite a few times when our family actually would have been going hungry were it not for wild game meat brought to the table through the use of firearms. While roasted goose or pheasant, venison chops, squirrel chowders, and similar dishes are terrific table fare to begin with, believe

me, when your deep-freeze is empty and the pantry's looking mighty spare, the aroma of game cooking warms your entire spirit.

There have also been, regrettably, times when I was forced to gain a little experience using firearms for defensive type purposes.

If for any reason I were forced to choose only one firearm, useful for these various purposes, no matter where I might happen to be, it would always be the same selection—a 12 gauge shotgun.



Whether for use on rocky New England's upland birds, Hudson Bay's high flying Canadians, Texas' white-tails, Yukon moose, or our own fat Indiana fox squirrels, with only a few extra accessories any American-made pump action 12 gauge would fill the bill admirably. My own pump gun is a Mossburg 500, chosen only because at the time of purchase it was the least expensive model of pump gun available. Similar shotguns, manufactured by Remington, USRA (Winchester), and other U.S. gun makers are just as well suited.

I would strongly recommend selecting about a 28-inch barrel, which is long enough for solid pointing on high passing waterfowl, yet not too long for quick handling on pheasant and quail. And I'd definitely pick out a gun with

an adjustable choke device on the muzzle, like a "Polychoke" or Mossburg's "C-Lect Choke," which allows for near instant selection of a wide range of choke constrictions, from wide open skeet patterns to smaller dense, "superfull" turkey chokes, without fumbling around with wrenches and replaceable choke tubes.

Should you envision a lot of hunting for squirrel and similar small game, or see a need for more than very occasional pest control shooting, obtaining a set of 12 ga/.410 adapter shells would be a terrific investment. Offered by several different makers and usually readily available through most sporting goods stores, gun shows, and mail order suppliers, these adapters allow the use of tiny 2½-inch

.410 shells in the big 12-bore's chamber. Not only will these offer greatly reduced noise and recoil, but should you decide to handload your own ammunition, the tiny shot and powder needs of the .410 can yield some solid savings as well.

When you start considering using your 12 gauge for hunting larger game animals, you'll need to start thinking about firing slug and/or buckshot loads. If you're going after game in the whitetail size class at fairly close yardages, especially in broken and brushy areas, I have yet to find anything more suitable than the pump 12 bore. With the choke set wide open, and 2-3/4" or even 3" magnum loads of either 00 or #4 buck (depending on preference), this represents a for-sure meat taker. For anything larger, or for

longer range, then slugs are the only viable option.

Back when I first purchased my own Mossburg, rifled shotgun barrels weren't yet available. So at that time I added an optional 24" smoothbore slug barrel, complete with rifle type sights, for slug hunting. Switching barrels, even in the field, is very simple and easy, requiring less than two minutes and no tools. With any brand of store purchased slug loads, this smooth bore barrel could keep all of its shots inside of a paper plate sized target at 75 yards. This is sufficient accuracy for deer or larger sized game at that range. Once I switched to shooting .69 caliber round balls, cast with a Lyman mold, and patched with cloth to fill the bore, I found the gun capable of keeping similar sized groups out to 125 yards, a 50 yard increase in range.

Today, though, real rifled shotgun barrels have become a readily available and affordable option, providing some real rifle-like accuracy. Just this year I finally obtained one of these rifled barrels for my own gun. However, when I tried firing conventional slugs through this new barrel, I was badly disappointed. The accuracy seemed hardly improved at all, though I've since learned that this is pretty normal with conventional slugs through any barrel. It was when I put a few rounds of the newer sabot type slugs through the gun, (now put out by many ammo makers), that I started being impressed.

At 100 yards, these newfangled slugs will print 3 and 4-inch groupings from this rifled barrel. I've seen an awful lot of folks bring home venison year after year with rifles that shot no better, and most deer rifles punch something like a 5/16 inch or 3/8 inch hole, compared with the 12 bore's 3/4 inch tunnel. Now, using one ounce slugs cast from one of Lee's nice aluminum molds, I'm easily keeping every shot in groups well under 6 inches at 200 yards with a shotgun. These rifled barrels really do bring the

slug hunter up to a whole different class, mating rifle accuracy with 12 gauge punch.

For some serious trophy hunter, out on that once in a lifetime hunt after a record book elk, antelope, caribou, or other real long range game, this really isn't the gun you'd want to take along. But for any sort of real, fill-the-freezer-with-meat hunting, which is what most of us are really interested in, this "go everywhere, do anything" gun really has no peers.

When any of us do have to start thinking in real terms of self-defense type firearms, there are a few things that have to be kept in mind. The first is that no long gun, including the 12 gauge pump we're talking about, will ever be as handy to tote around as a holstered handgun. Riding holstered at your hip, a revolver is just there. You have to think about carrying a shotgun. But the second issue is that any repeating long gun, especially your pump 12 bore, can do a whole lot more than any pistol. In the event you'd ever be facing armed human antagonists, the shotgun gives you a tremendous psychological advantage. Seen from the wrong end, the hole in a .44 or .45 barrel looks *big*. But the muzzle end of a 12 gauge looks like the mouth of Mt. St. Helens fixing to erupt.

It doesn't hurt any, either, to remember there are very good reasons why, since the Spanish American War, through two world wars, Korea, Viet Nam, Desert Storm, etc., our military has been issuing Winchester, Remington, and Mossburg pump 12 bores (some even equipped with bayonet lugs), for close quarter fighting. Or that when really faced with for-certain dangers, almost every law enforcement officer in America reaches for his (or her) pump 12 gauge.

In actuality, for just about any conceivable real life up close and deadly self-defense situation where a firearm is needed, a 12 gauge shotgun in pump action persuasion is very probably the very finest weapon obtainable.

Personally, in most of these instances, I'd steer wide of the magnum loads for defense purposes. At close quarters, a standard field type load is still awesomely powerful, yet carries a lower recoil level allowing quicker follow up shots, if needed, while in a few specific instances, #4 buckshot (with 27, 1/4-inch pellets in a 2 3/4-inch shell) might prove a better choice. In nearly all real life close-up self-defense or combat type shooting, a 1 1/4-ounce load of either #2 or BB size birdshot is normally the best possible selection.

I can tell you, with absolute certainty, that when used against attacks by hunger-crazed feral dogs at extremely hazardous close ranges, these large birdshot loads are utterly reliable stopping loads.

With everything looked at under the clear daylight of backwoods reality, and after all has been said, weighed, and considered, no matter whether your limit were placed by financial or mobility constraints, lack of enthusiasm for firearms, or other matters, should you find yourself facing a need to acquire a gun but feel yourself limited to a single selection, if you'll chose any American made 12 gauge pump action shotgun along with the few options discussed in this article, I really don't believe that you'll ever feel as if you hadn't made the best possible selection.

Of course, unless you are willing to learn a little about shooting, no firearm will do you much good. But that's a different discussion, isn't it? Δ

Visit the *Backwoods Home Magazine* website at:

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Build a flying “helicopter” boomerang

By Don Fallick

This boomerang can't be used for hunting, like an Australian boomerang, but it is much easier to throw. A few minutes practice in a large, open field is all it takes to become an expert with a helicopter boomerang. It nearly always comes back, and is easily made of readily available materials.

Select two pieces of wooden lath, about ½-inch thick, two-inches wide, and up to four feet long. The exact dimensions aren't critical, as long as both pieces are the same. They should be straight-grained, unwarped, and free from knots. Lay the laths out in a cross shape, forming four rotor blades of equal length. Mark the center where they cross. Leave these center portions as is.

Whittle the rest of the blades into an airfoil shape. Here's how: mark an arrow on each blade, pointing counter-clockwise if you are right-handed, clockwise if left-handed. Each arrow points to the leading edge of its blade. Separate the laths and scribe a line along the leading edge of each blade, 1/16-inch above the bottom surface. At

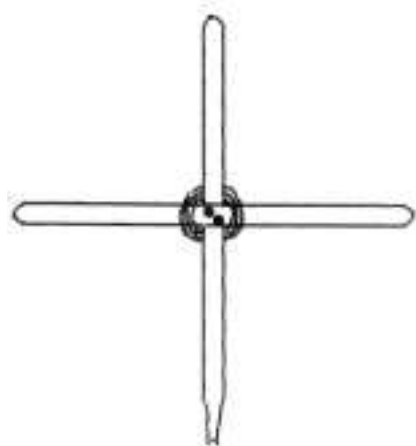


Figure 2. A view of a “helicopter” boomerang, from above, complete with a handle by which to throw it.

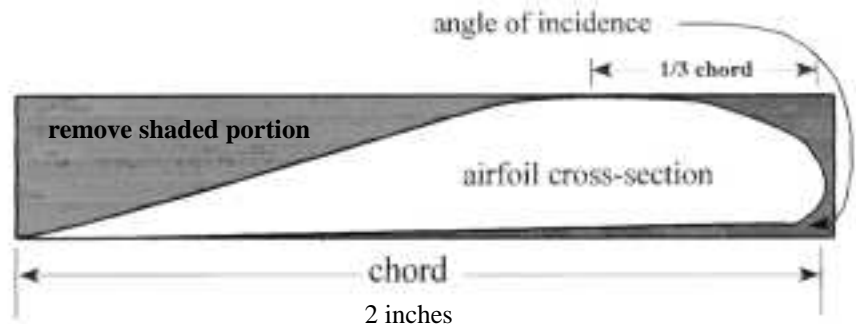


Figure 1. A cross-sectional view of a piece of lath, two inches wide and one inch thick, that shows the wood that is whittled or sanded off (shaded portion) to create an airfoil of the wood that is left. Reverse the drawing for left-handed boomerang.

the tip of each blade, connect the end of this line to the bottom corner of the trailing edge. This shows the angle the blade will make with the airstream (the angle of incidence). Sand away all the wood below the angle of incidence, leaving a new bottom surface for the blade. Or, you can whittle most of the excess wood off with a sharp knife. If you do, you will still need to sand this surface with a sanding block and sandpaper to make it flat. Improvise a sanding block by wrapping sandpaper around a flat piece of scrap lumber.

Round the leading edge of each blade, either by whittling or by sanding. The distance from the leading edge of a rotor blade to its trailing edge is called the chord. Measure on the top surface of each blade a distance equal to 1/3 of the chord behind the leading edge and draw a line the length of the blade. Starting at this line, taper the trailing edge down to its bottom corner. See Figure 1. This shape is called an airfoil. Form identical airfoils on each blade. Close to the centers, where the laths will cross, try for a smooth transition from the airfoil shape to the rectangular lath shape.

On three of the blades, round the tips like the ends of a propeller. The

other blade gets its last three or four-inches whittled into a handle. See Figure 2. Sand everything. Use medium grit sandpaper to smooth out lumps and bumps, and fine grit sandpaper afterwards to make a very smooth surface. Glue the blades together and fasten with a couple of brads or small finish nails, so they can't slip while the glue is drying. Allow to dry overnight. For best performance, varnish or shellac the whole boomerang to a really smooth finish. Strengthen the glue joint by wrapping it tightly with three or four turns of string, twine, or wire.

Throwing

Stand in the middle of a very large, clear area, at least 150 feet square. Warn any bystanders. A thrown boomerang can cause serious injury. Hold the boomerang in your right hand (if it was made right-handed) and throw it overhand, with the boomerang vertical, like a TV Indian throwing a tomahawk.

Throw hard, directly into the wind, and aim a little above the horizon (about 10° above horizontal). A right-handed boomerang will circle to the left (opposite for a left-handed one), gradually changing to a nearly hori-

zontal glide. If the wind is too strong or you didn't throw it hard enough, it may not come all the way back to you. If you threw too hard for the wind, the boomerang will complete its circle in front of you.

With practice, you can make it return and land at your feet, or catch it like a frisbee before it lands.

How it works

A thrown boomerang moves along the direction of flight, or flight path, but it is also spinning. At any moment, two of the blades are moving across the flight path, generating equal amounts of lift, but the other two have quite different airspeeds.

The forward-spinning blade adds its spin to the forward airspeed along the flight path, producing *lots* of lift. The "backward-turning" blade subtracts its rotation from the speed along the flight path, producing little or no lift. This uneven lift acts like a force trying to tip the spinning boomerang over onto its back.

The weight of the boomerang's blades spinning in flight makes it act like a bicycle wheel in motion. Just as a bicycle wheel turns when you lean the bicycle, a boomerang turns when uneven lift tries to tip it over. All boomerangs work on these combined principles, but the four-bladed "helicopter" boomerang works best and is easiest to make.

Tools and materials

Tools: hammer, knife, paint brush, pencil or pen, ruler or tape measure, a sanding block or flat scrap wood.

Materials: two wooden laths of the same length, two - four feet long, brads or small finish nails, some string, twine, or wire, medium and fine grit sandpaper, wood glue, and varnish or shellac.

That's it! Δ

The Ninth Year

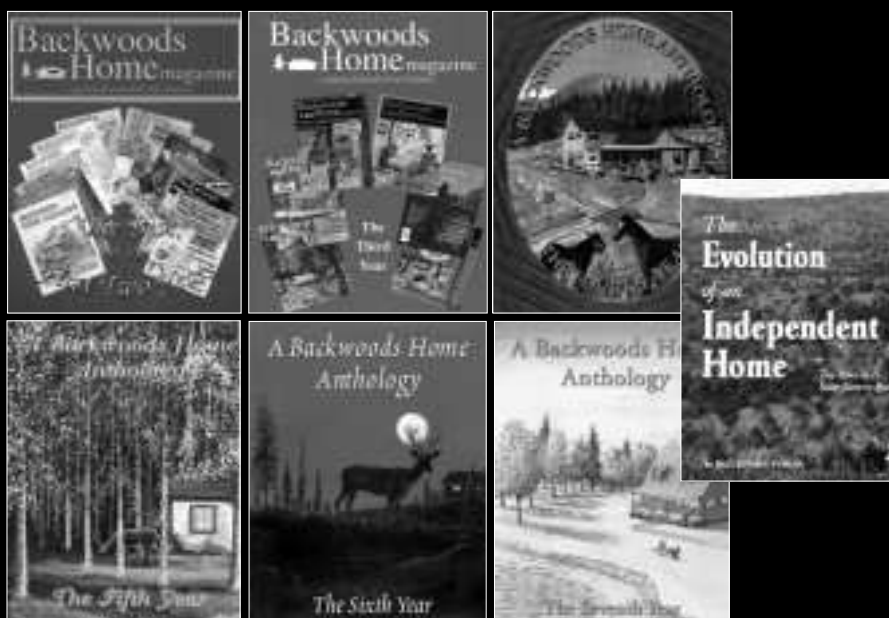
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Make beautiful jewelry using porcupine quills

By Christina VanGinkel

Porcupine quills can be used along with seed beads and other materials to make some of the most exquisite jewelry and decorations you've ever seen.

Where would you find quills? There are two options: purchase them or harvest them. I am going to focus on the more natural, and cheaper, way—harvesting them.

The porcupine is found in many areas throughout the United States and Canada. In northern Wisconsin, where I live and porcupines are abundant, they are often the byproducts of road kills. You can easily spot one chewing on just about any unoccupied cabin or eating leaves and bark in a tree. They also eat the shed antlers from deer and elk.

The typical porcupine has over 30,000 quills. While many of these may not be suitable for working with, most of them are. Removing quills is actually quite easy, as long as a few easily remembered rules are followed.

Materials needed to remove quills:

Newspaper
Two to three large containers with lids (large coffee cans work fine)
Heavy gloves
Pliers (not necessary, but handy)

You will need an area where you can work that is inaccessible to any animals you own. Even after the quills no longer have barbs on them, keep them away from your family cat. Cats will eat the quills as if they are a delicacy. Also, remember that while the quills may come effortlessly out of the porcupine, until you debarb them, they will not come out of you as easily.

It is best to put newspaper under the porky and around the area. You will thank yourself if you remember to do

this simple step. With the gloves on, carefully start pulling the quills out, placing them directly into the containers. Quills are loosely set in the skin, so removal is usually simple. If some become embedded in your gloves, use the pliers to pull them out. Working from the sides, up the back is best. Completely clean one section of hide at a time. Thorough cleaning of one porcupine will take several hours.



Necklaces, earring drops, and eagles tail are made of porcupine quills.

When you are done removing quills, take care in discarding the leftovers. Carefully wrap any broken or unusable quills in the newspaper for disposal. If you have a safe place to throw the porky while it decomposes, the ribs can later be retrieved. I use them, four at a time, for dream catchers. The teeth and claws can also be put to use in a necklace or wall hanging. One catalog that I have sells claws for \$.85 each.

To clean & store quills:

Dish soap (grease fighting)
Old dish pan
Fine mesh colander
Long-handled spoon
Newspaper or towels
Hot water
Containers with lids

Fill an old dish pan, half full with real *hot* water. Add two or three squirts of dish soap. Place quills inside colander, and immerse into the solution. While the colander is not an absolute necessity, it will save you both time and possibly stabs from the quills. Swish and agitate the quills around with the spoon. I let them soak for 10 minutes, wash, and repeat the steps three or four times. Change the water (refilling with hot) between washes. Rinse free of soap and lay out in single layers on newspaper or towel to dry.

This is a good time to pick out any that are clearly unusable. Some may be no thicker than hair. A few may have blemishes on them that make them undesirable. Thicker ones sometimes have creases right down the middle, but don't throw them away. While nothing will take the creases out, they can be flattened and used in embroidery.

When the quills are completely dry, store them in sealed containers such as plastic, glass, or even old coffee cans, as long as the containers have tight lids. Once quills have been debarbed, they can also be stored in clear zip style bags.

To dye quills:

Scissors
Old pans
Newspaper
Purchased dye or organic dye solution

Recipe for organic dye solution:

One cup blackberries
Two cups water to start (add more as needed)
One teaspoon lemon
Two teaspoons vinegar

Combine ingredients, bring to a boil, add quills to solution, and boil for approximately a half hour over low heat. Do not let boil dry, add water as



Quills boiling in dye

needed. Rinse quills well in cold water. Dry. Store as before. This makes a beautiful light rose-colored quill.

Quills are easy to dye, and they are fun to work with when in a rainbow of colors. Commercial dyes work fine, coming in a wide range of colors. I have included one organic dye that I use. If you go this route, experimentation works best. Just remember to add the lemon juice, as it works as a natural softener, and the vinegar, as it sets the color. Some other ingredients to try are wild plum bark, blueberries, and even dandelions. When dyeing the quills, it is not necessary to remove the barbs, but I have found that when working with the organic dyes, they take the color much faster.

Debarbing the quills:

Carefully snip the top and bottom end of each quill. A small pair of scissors works best for this. Snip between 1/8 inch or 1/4 inch off each end. Discard end tips immediately. Working over a refuse container is the easiest way I have found to do this.

Using the quills:

Now that you have all these quills, what do you do with them? Turn them into money, of course. They have been a number one seller for me for the past 10 years. I sell them at craft fairs, festivals, and at consignment shops. Surprisingly though, the stores that I sell most of them through are gift shops. Because of their unusual nature, they overstep the typical constraints of many crafts.

Because the supplies to get started beading are minimal, and added with gifts from nature that are free, such as porcupine quills, profit can be quite high. Your biggest investment is time.

How much money can you make? An example cost breakdown on a simple pair of earrings would be: quills free, \$.15 on earwires, \$.10 on thread, \$.25 on beads, and add in \$.25 for your supplies you use each time, such as needle, beeswax, etc., and you have a grand total of 75 cents. This same pair will sell for \$5 to \$10, depending on the area you are in. A similar breakdown on an elaborate piece of beading with large quill drops, such as a necklace with bone, would be: quills free, \$3 for the hairpipe bone, \$2 for the crow (larger) beads, \$.25 for the

sinew, \$1 for the seed beads, and again, \$.25 for supplies used on a regular basis. This comes to a grand total of \$6.50, and it would sell for about \$30. How about a choker made with some larger quills in place of the bone, and using size 8 beads instead of the larger crow beads? This could be made for \$1 total, and sell for \$10 to \$15. How is that for profit?

Basic materials for beading:

Size #13 beading needle
Mono nylon beading thread size 00
Beeswax
Scissors
Seed beads in assorted colors, size 10 or 11
Assorted clean, dry, snipped quills
Also needed for earrings—1 pair earwires

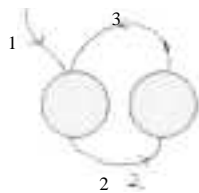
Beginning beading:

The stitch that I use most often, and have used in the following pattern is referred to as the Brick or Cheyenne stitch. While it appears to be complex in appearance, it is rather simple to learn. Patience is required but a few things that will make any beading project, with or without quills, easier to do are to remember a few basic steps.



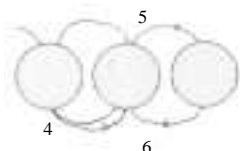
Porcupine quill necklace

Instructions

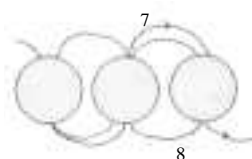


Start of Base Row

Pick up one bead, go through bead twice, leaving yourself at least three inches of a tail. Start as follows, always going in direction of arrows. Pick up next bead, go back through first bead, and then back up through bottom of second bead, continue to add beads in this manner, always working back through previous bead.



After each bead, check your thread tension. Threads should be snug, but not so tight as to create stress on the threads.



Turn work before going on to next step.

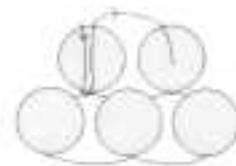


Second Row

Pick up the next bead, go behind thread.



come back up through same bead.



Repeat steps 4 & 5

Cut quills to desired length. In a small project, such as these earrings try to keep the width of the quills consistent throughout the design.

Top

To finish top, pick up six beads, go through last bead in step six, go back through all beads in loop again, and then come back down to first bead in first row.

To attach quills, pick up one seed bead, slide needle carefully through center of debarbed quill, pick up another seed bead, and go back up center of quill, back through seed bead, and first bead of row one, come back down through bead two.

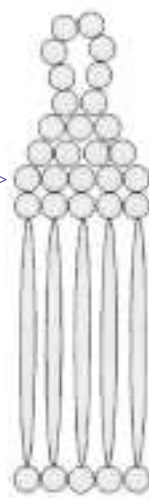
When you have completed the third quill drop, run your thread backup to the top, weave the thread in and out a few times for extra strength. Fasten off.

If you prefer, you may singe off any excess threads that may be showing, be careful if you do this, that you do not burn the thread so close that it all comes apart. Attach ear wires. Enjoy!

base row →
quills



base row →



Centerdrops on kokopellis are quills

Always run your thread that you will be using through a piece of beeswax. It prevents the thread from fraying and tangling, and it adds extra strength to the finest of threads. Also, never use a cotton thread. Even when used with beeswax, it will fray and tear much too easily when used in conjunction with the glass beads. There can be nothing worse than to be quite a ways into a large piece of beading and realize that your threads are fraying or even tearing. Read the directions for the project all the way through before starting.

Purchasing quills:

If you decide that you would like to work with porcupine quills, but would like to skip the actual harvesting of them, there are many sources for purchasing them. I have picked two companies that I have purchased items from for several years: Noc Bay Trading Company, P. O. Box 295, 1133 Washington Ave., Escanaba, MI, 49829. Tel.: 1-906-789-0505; Fire Mountain Gems, 28195 Redwood Highway, Cave Junction, OR, 97523-9304, Tel.: 1-888-347-3436. Δ